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# A LEGAL “JURISDICTIONAL TRAIN WRECK”

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## A LEGAL “JURISDICTIONAL TRAIN WRECK”

Steven Ferrey\*

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“A jurisdictional train wreck.”<sup>1</sup>

#### I. RECONSTRUCTING A TRAIN WRECK

Three unrelated decisions from the United States Supreme Court initiated a tectonic shift in the separation of power in American law. These three decisions reconfigure and re-sculpt traditional judicial deference afforded to the executive branch. Together these decisions alter *Chevron* deference.<sup>2</sup> These decisions change interpretation of the separation of power in U.S. constitutional law.

*Chevron* was an environmental dispute interpreting the federal Clean Air Act, and these three recent Court decisions similarly interpret other provisions of the same Act. The Supreme Court, *de novo*, in *Michigan v. EPA*, mandated a new quantitative cost consideration as the regulatory prerequisite before the executive branch may enact legally defensible regulations.<sup>3</sup> A year after the *Michigan* decision, in *West Virginia v. EPA*,<sup>4</sup> the Supreme Court took an unprecedented step: More than two years before a legal challenge could reach it or was argued before the lower court,<sup>5</sup> and within less than three weeks of an application, the Court applied a stay directly to the Environmental Protection Agency’s (EPA) Clean Power Plan (CPP) rule, rather than to a lower court judicial decision on appeal, and no party in the matter was able to point to any previous instance of this. The movants’ applications for a stay and its granting heavily relied on *Michigan v. EPA*,<sup>6</sup> and *UARG*

1. Lynn Garner, *FERC Comm’rs Split on Party Lines Over EPA’s Carbon Rule for Power Plants*, BLOOMBERG BNA ENERGY & CLIMATE REP. (July 29, 2014), [http://info.bna.com/climate/summary\\_news.aspx?ID=274977](http://info.bna.com/climate/summary_news.aspx?ID=274977). Congressional testimony in 2014 by FERC Commissioner Clark characterized the conflict between proposed environmental regulation in the CPP to assist climate goals and the pressing counter requirement to protect power system reliability and resiliency.

2. *Chevron U.S.A., Inc. v. Nat. Res. Def. Council*, 467 U.S. 837 (1984).

3. *Mich. v. EPA*, 135 S. Ct. 2699 (2015).

4. *W. Va. v. EPA*, 136 S. Ct. 1000 (2016).

5. *Id.*; see Jonathan Adler, *Supreme Court put the brakes on the EPA’s Clean Power Plan*, WASHINGTON POST, Feb. 9 2016, [https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/02/09/supreme-court-puts-the-brakes-on-the-epas-clean-power-plan/?utm\\_term=.dd512a870f7](https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/02/09/supreme-court-puts-the-brakes-on-the-epas-clean-power-plan/?utm_term=.dd512a870f7); Erin Ryan, *The Clean Power Plan, the Supreme Court’s Stay and Irreparable Harm*, HUFFINGTON POST, Feb. 16, 2016, [https://www.huffingtonpost.com/erin-ryan/the-clean-power-plan-the-\\_b\\_9259858.html](https://www.huffingtonpost.com/erin-ryan/the-clean-power-plan-the-_b_9259858.html).

6. *Mich.*, 135 S. Ct. at 2707-08.

v. *EPA*,<sup>7</sup> analyzed in detail below.<sup>8</sup> This stay of the CPP embodies in law a progressive retreat from the mainstay of *Chevron* deference for agency decisions embodied in recent Supreme Court decisions, analyzed below, in *Utility Air Regulatory Group v. EPA*,<sup>9</sup> *King v. Burwell*,<sup>10</sup> and *Michigan v. EPA*.<sup>11</sup> These cases shift the balance of power to construe Congressional statutes from the executive branch to the courts.

Along with the Court reconfiguring executive branch power, the approach and methods of the executive branch also changed. In this simmering constitutional law, new legal ingredients were added with the change from the Obama Administration to the Trump Administration. The Obama Administration calculated and claimed estimated net *global* benefits of its Clean Power Plan addressing global warming; in 2017, the Trump Administration instituted ‘America first’ accounting which now renders the program no longer cost-justified under accounting for only U.S. benefits.<sup>12</sup> Changes in the legal mathematical algorithm create night versus day differences in whether the same executive branch regulation is cost-justified, depending on whether one counts:

- Climate change mitigation benefits occurring outside the United States, over which U.S. law has no legal jurisdiction, and across borders which U.S. regulation does not reach
- Indirect so-called “co-benefits” that the Clean Power Plan does not address<sup>13</sup>

This article navigates this fundamental new Supreme Court redetermination of constitutional separation of powers. The Supreme Court decisions construe power over one of the most significant controversies of the twenty-first century—control of and remedies for escalating global warming. Even though the Supreme Court’s indefinite stay of executive action in *West Virginia* suspends national climate

7. *Utility Air Recognition Group (UARG) v. EPA*, 134 S. Ct. 2427, 2444 (2013). The application of the twenty-nine states for a stay referred to and relied on *UARG v. EPA* throughout.

8. See *infra* Section IV.B-C; *W. Va. v. EPA*, No. 15A773 (Feb. 9, 2016) 2016 WL 502947 (mem.).

9. *UARG*, 134 S. Ct. at 2444 (disfavoring new agency interpretation).

10. *King v. Burwell*, 135 S. Ct. 2480, 2488-89 (2015) (disregarding opinion of non-expert agencies).

11. *Mich.*, 135 S. Ct. at 2707-08 (prerequisite *de novo* agency consideration of costs before regulation).

12. See EPA, EPA TAKES ANOTHER STEP TO ADVANCE PRESIDENT TRUMP’S AMERICAN FIRST STRATEGY, PROPOSES REPEAL OF ‘CLEAN POWER PLAN’ (Oct. 10, 2017) <https://www.epa.gov/newsreleases/epa-takes-another-step-advance-president-trumps-america-first-strategy-proposes-repeal>. The repeal of the CPP is estimated by the Trump Administration EPA to save thirty-three billion dollars in avoided compliance costs in 2030.

13. See *id.* Instead of considering global climate benefits, the Trump administration EPA now only shows domestic benefits.

policy, any next steps to address climate change became even more dynamic with the change in Presidential administrations.

Section II of this article examines the Obama Administration Clean Power Plan, its costs, and its legally disputed benefits. The Supreme Court took the wholly unprecedented step to indefinitely stay this executive rule years before the legal challenge reached the Supreme Court or was decided by the court of appeals on the merits,<sup>14</sup> whereafter the D.C. Circuit has repeatedly delayed the required decision on the merits for more than one year.<sup>15</sup> The issue is now suspended in legal limbo.

Section III examines what a Federal Energy Regulatory Commissioner called a “jurisdictional train wreck.”<sup>16</sup> Section III tracks the impact of the 2017 change in Presidential administrations on legal interpretation, recent executive orders to implement a new view of executive power, and use of the Congressional Review Act regarding major recent domestic regulation. Given the recent Supreme Court-mandated economic cost considerations in agency rulemaking, Section III analyzes how a new Presidential administration can and has changed the administrative law algorithm through a narrower recalculation of:

- Only domestic U.S. benefits of the Clean Power Plan,
- Exclusion of any global benefits beyond the geographic footprint of America, and
- Exclusion of “co-benefits” not regulated by the CPP

Section IV analyzes in legal detail the fulcrum created by three recent Supreme Court opinions changing the power of executive branch agencies to make law. First, Section IV analyzes the still-pending litigation directly challenging the Clean Power Plan, triggering the highly unusual early Supreme Court indefinite stay years before the case reached it and before any court had reached a decision on the merits.<sup>17</sup> Next, Section IV analyzes the Supreme Court ruling that the executive branch cannot “tailor” statutory provisions to its preferences.<sup>18</sup> Third, Section IV analyzes the Court decision mandating executive branch consideration of costs before initiating certain new regulation.<sup>19</sup> Together, these three decisions change the *Chevron* doctrine as applied

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14. Erin Ryan, *The Clean Power Plan, the Supreme Court's Stay and Irreparable Harm*, HUFFINGTON POST, Feb. 16, 2016, [https://www.huffingtonpost.com/erin-ryan/the-clean-power-plan-the-\\_b\\_9259858.html](https://www.huffingtonpost.com/erin-ryan/the-clean-power-plan-the-_b_9259858.html).

15. See *W. Va. v. EPA*, 136 S. Ct. 1000 (2016).

16. Garner, *supra* note 1.

17. See *W. Va.*, 136 S. Ct. 1000.

18. *UARG v. EPA*, 134 S. Ct. 2427, 2445 (2014).

19. *Mich.*, 135 S. Ct. at 2711.

to U.S. constitutional and administrative law, a change which former Supreme Court Justice John Paul Stevens called “truly mind-boggling . . . a free-wheeling statutory decision can do even more harm . . . to the . . . Court itself—than misinterpretations of the Constitution.”<sup>20</sup>

Section V examines what happens when administrations change and regulations are repealed or Court legal stays are extended. Section V also documents how the American system is resilient enough to find alternative legal routes to ends. To date, even without the Supreme Court allowing the Clean Power Plan to proceed under the new administration, power sector carbon emissions are still on track to achieve the dramatic reduction required if the CPP were in place and not stayed or repealed. Section VI takes the next step to examine technology by technology at a micro level how this is occurring with the law stayed, through larger forces at work.

Section VII analyzes the long-term implications for constitutional and administrative U.S. law. These decisions permanently limit discretion of an agency to tailor their implementation of a statute,<sup>21</sup> inject mandatory new quantitative cost consideration even when not expressly required by statute,<sup>22</sup> and indefinitely suspend executive branch regulations years before the Supreme Court gets the case merits to review.<sup>23</sup> This trio of decisions reconfigures traditional *Chevron* deference, a foundation of American law for the last third of a century.<sup>24</sup> Powers of the executive branch are more restricted, and agencies have been stripped of some traditional discretion. This is a significant restructuring of American law.

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20. Former Supreme Court Justice John Paul Stevens, Speech to ABA Meeting in Chicago (July 31, 2015), [http://www.supremecourt.gov/publicinfo/speeches/JPS\\_Speech\\_ABA\\_Section\\_of\\_Litigation\\_International\\_Human\\_Rights\\_Award\\_Luncheon\\_07-31-15.pdf](http://www.supremecourt.gov/publicinfo/speeches/JPS_Speech_ABA_Section_of_Litigation_International_Human_Rights_Award_Luncheon_07-31-15.pdf).

21. See generally *URG*, 134 S. Ct. 2427.

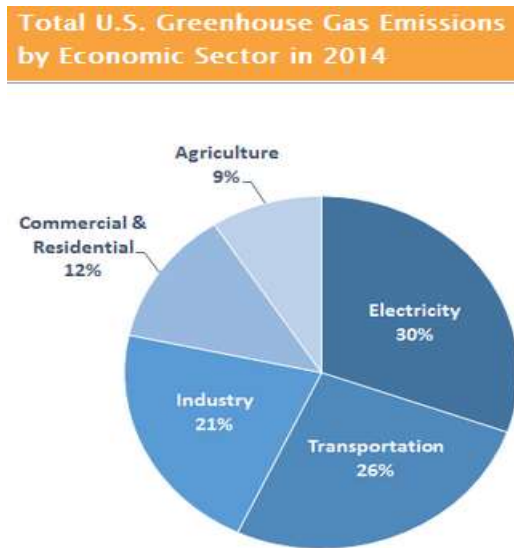
22. *Mich.*, 135 S. Ct. at 2711.

23. See *W. Va.*, 136 S. Ct. 1000.

24. See *Chevron v. Nat'l Res. Def. Council*, 467 U.S. 837 (1984).

## II. THE LEGAL MECHANISMS OF THE CLEAN POWER PLAN ENACTMENT AND/OR REPEAL

The change in the foundation of administrative law separating the power of different branches of government is in even sharper relief because the underlying challenged law affects one of the most pressing issues of the century—climate change and global warming. This involves both energy and environmental policy. Electric power production is the most significant source of CO<sub>2</sub> emissions in the United States which contributes to climate change.



**Figure 1**<sup>25</sup>

Initiatives during the Obama administration to regulate the environment focused on the electric power sector, on the use of coal resources on hazardous and climate changing emissions, and on mitigating climate change. These initiatives required states to take the laboring hand by implementing choices to accomplish these policies, and included:

- Joining with most other nations in the world in the 2015 Paris Accord.<sup>26</sup>

25. See EPA, TOTAL U.S. GREENHOUSE GAS EMISSIONS BY ECONOMIC SECTOR IN 2014 (Jan. 19, 2017), [https://19january2017snapshot.epa.gov/ghgemissions/sources-greenhouse-gas-emissions\\_.html](https://19january2017snapshot.epa.gov/ghgemissions/sources-greenhouse-gas-emissions_.html).

26. See UNITED NATIONS, LIST OF PARTIES THAT SIGNED THE PARIS AGREEMENT ON 22 APRIL, <http://www.un.org/sustainabledevelopment/blog/2016/04/parisagreementsingatures/>.

- Restricting power plant hazardous mercury emissions, since overturned and remanded by the Supreme Court in *Michigan v. EPA*.<sup>27</sup>
- Restricting CO<sub>2</sub> global warming emissions through the Clean Power Plan focused on coal-fired power plants, which has since been preliminarily enjoined by the Supreme Court in *West Virginia v. EPA*.<sup>28</sup>

This article focuses on each of these prongs in which the Court changes administrative and constitutional law in the United States. We start, with the Clean Power Plan.

### A. Federal CPP Standards; State Plans For Implementation

#### 1. The Administrative Rule

The Obama Administration’s Clean Power Plan was a foundational U.S. environmental regulatory action; it counted international benefits to meet Kyoto Protocol and Paris Agreement 2015 pledges to reduce carbon emissions.<sup>29</sup> EPA Secretary Pruitt criticized the Paris Agreement as internationally imbalanced: “China and India got away, the largest producers of CO<sub>2</sub> internationally, got away scot-free. They didn’t have to take steps until 2030. So we’ve penalized ourselves through lost jobs while China and India didn’t take steps to address the issue internationally.”<sup>30</sup> When Syria joined the Paris Climate Accord in late 2017, it left the United States as the only organized nation neither to have joined nor remained within the Accord.<sup>31</sup>

The Clean Power Plan exclusively targeted fossil fuel electricity production for reductions of carbon.<sup>32</sup> The Obama Administration’s October 2015 Clean Power Plan is a 460-page rule targeting CO<sub>2</sub>

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27. See *infra* Section IV.C.

28. *W. Va.*, 136 S. Ct. 1000; see *infra* Section II.A.2.

29. See *infra* Section III.C. As part of the Kyoto Protocol which affected only approximately three dozen developed countries and the more recent Paris Agreement which took the next international step of non-legally binding pledges of all countries to reduce warming emissions, countries pledged different amounts of reduction of their GHGs emissions from different year baselines and of different amounts.

30. Martin Pengelly, *Trump to Sign Executive Order Undoing Obama’s Clean Power Plan*, GUARDIAN, Mar. 26, 2017, <https://www.theguardian.com/environment/2017/mar/26/trump-executive-order-clean-power-plan-coal-plants>.

31. Brady Dennis, *As Syria Embraces Paris Climate Deal, it’s the United States Against the World*, WASHINGTON POST, Nov. 7, 2017, [https://www.washingtonpost.com/news/energy-environment/wp/2017/11/07/as-syria-embraces-paris-climate-deal-its-the-united-states-against-the-world/?utm\\_term=.3f4d0b134644](https://www.washingtonpost.com/news/energy-environment/wp/2017/11/07/as-syria-embraces-paris-climate-deal-its-the-united-states-against-the-world/?utm_term=.3f4d0b134644).

32. See *infra* notes 50, 55-56.



emissions from large power generation facilities<sup>33</sup> in order to achieve a required thirty-two percent reduction of annual CO<sub>2</sub> emissions from new and existing power plants<sup>34</sup> by 2030, measured against a baseline of 2005 carbon emission levels from that year's power generation plants.<sup>35</sup> In certain states, this would require up to a fifty percent cut in carbon intensity of existing electric power generation.<sup>36</sup> EPA received 2.5 million comments from environmental groups, regulated industry, the public, and states, in response to its proposed CPP regulation, under which, each state would be required to develop standards of performance to limit CO<sub>2</sub> emissions from existing fossil-fuel-fired generating facilities.<sup>37</sup>

The CPP requires state-differentiated plans to satisfy federally-mandated state requirements. It modifies parts of the Clean Air Act, which provides a comprehensive scheme for air pollution control, addressing three general categories of pollutants emitted from stationary sources: criteria pollutants, hazardous pollutants, and "pollutants that are (or may be) harmful to public health or welfare but are not [hazardous or criteria pollutants or] cannot be controlled under [those programs.]"<sup>38</sup> "Six relatively ubiquitous "criteria" pollutants are regulated under 42 U.S.C. §§ 7408-7410"<sup>39</sup>: oxides of nitrogen, sulfur dioxide, lead, carbon

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33. 80 Fed. Reg. 64,661–65,120, *RIN 2060-AR33* (Oct. 23, 2015).

34. EPA, FACT SHEET: CLEAN POWER PLAN OVERVIEW, <http://www2.epa.gov/cleanpowerplan/fact-sheet-clean-power-plan-overview>. Between the rule's promulgation in 2014 and final rule issuance in 2015, the EPA delayed implementation. Clean Power Plan, 80 Fed. Reg. 64,665. This included more time for state compliance with a two-year delay for states filing required plans from 2016 to 2018, and a two-year delay in the first year of required CO<sub>2</sub> reductions, from 2020 to 2022. *Id.* at 64,669. The EPA's final regulation indicates that the goal of this rule is to substitute gas for coal in the generation of electricity. *Id.* at 64,667. The EPA increased how much CO<sub>2</sub> emissions will have to be brought down from the 2005 baseline in the next fifteen years from the thirty percent proposed to thirty-two percent in the final rule. *Id.* at 64,665.

35. Clean Power Plan, 80 Fed. Reg. 64665 (Oct. 23, 2015); *see also* Juliet Eilperin & Steven Mufson, *EPA Proposes Cutting Carbon Dioxide Emissions from Coal Plants 30% by 2030*, WASHINGTON POST (June 2, 2014), [https://www.washingtonpost.com/national/health-science/epa-to-propose-cutting-carbon-dioxide-emissions-from-coal-plants-30percent-by-2030/2014/06/01/f5055d94-e9a8-11e3-9f5c-9075d5508f0a\\_story.html](https://www.washingtonpost.com/national/health-science/epa-to-propose-cutting-carbon-dioxide-emissions-from-coal-plants-30percent-by-2030/2014/06/01/f5055d94-e9a8-11e3-9f5c-9075d5508f0a_story.html).

36. Paul DeCotis, *What the Clean Power Plan Means for You & How to Tackle Building a Compliance Strategy*, ENERGY BIZ (Nov. 7, 2014), <http://www.energybiz.com/article/14/11/what-clean-power-plan-means-you-how-tackle-building-compliance-strategy>.

37. EPA, REGULATORY IMPACT ANALYSIS FOR THE PROPOSED STANDARDS OF PERFORMANCE FOR GREENHOUSE GAS EMISSION FOR NEW STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS at 1-1 (Sept. 2013), <http://www2.epa.gov/sites/production/files/2013-09/documents/20130920proposalria.pdf>.

38. Final Brief for Respondents at 3, *Murray Energy Corp. v. EPA*, No. 14-1112 & No.12-1151 (Mar. 9, 2015).

39. *Id.*

monoxide, particulate matter, and ozone.<sup>40</sup> “Once EPA issues air quality criteria for [these] pollutants, the Administrator of the Agency must propose primary National Ambient Air Quality Standards (NAAQS) for them at levels “requisite to protect the public health” with an “adequate margin of safety.”<sup>41</sup>

Apart from criteria pollutants and under a separate section of the Act, “hazardous air pollutants” are regulated under 42 U.S.C. § 7412.<sup>42</sup> “EPA must publish and revise a list of “major” and “area” source categories of hazardous pollutants, and then has a nondiscretionary obligation to establish achievable emission standards for all listed hazardous air pollutants emitted by sources within a listed category.”<sup>43</sup> “The final major category of pollutants covered by the [Clean Air Act,] harmful pollutants not regulated under the NAAQS or hazardous pollutant programs are subject to regulation under 42 U.S.C. § 7411.”<sup>44</sup>

“Section 7411 has two main components[:] First, Section 7411(b) requires EPA to promulgate federal “standards of performance” addressing *new* stationary sources that cause or contribute significantly to “air pollution which may reasonably be anticipated to endanger public health or welfare.”<sup>45</sup> “[S]ection 7411(d) authorizes EPA to promulgate regulations [that require] states to establish standards of performance for *existing* stationary sources of the same pollutant” “once EPA has set *new* source standards addressing emissions of a particular pollutant.”<sup>46</sup> “If a state fails to submit a satisfactory plan, EPA is authorized to prescribe a plan for the state, and... enforce plans where states fail to do so.”<sup>47</sup>

During the Obama Administration, EPA utilized the regulation of vehicle emissions as the legal initial step in order thereafter to regulate stationary power plant emissions. Once any substance becomes a regulated pollutant (whether or not a criteria or toxic pollutant) under the Clean Air Act, other provisions expand that regulation.<sup>48</sup> After the *Massachusetts v. EPA* decision four years before,<sup>49</sup> the Act began to regulate greenhouse gasses for light-duty vehicles as mobile sources in

40. See EPA, *Criteria Air Pollutants*, <https://www.epa.gov/criteria-air-pollutants>; see also FERREY, ENVIRONMENTAL LAW 189 exhibit 5.1, 191 exhibit 5.2.

41. See *Murray Energy Corp. v. EPA*, 788 F.3d 330 (D.C. Cir. 2015).

42. Final Brief for Respondents at 3, *Murray Energy Corp. v. EPA*, No. 14-1112 & No.12-1151 (Mar. 9, 2015).

43. *Id.* at 4.

44. *Id.* at 5.

45. See *Murray*, 788 F.3d 330.

46. *Id.*

47. *Id.*

48. See EPA, THE CLEAN AIR ACT IN A NUTSHELL: HOW IT WORKS 18 (Mar. 22, 2013) [https://www.epa.gov/sites/production/files/2015-05/documents/caa\\_nutshell.pdf](https://www.epa.gov/sites/production/files/2015-05/documents/caa_nutshell.pdf).

49. *Mass. v. EPA*, 549 U.S. 497 (2007).

2011, four years after the *Massachusetts v. EPA* decision.<sup>50</sup> In 2009, EPA issued a finding that six greenhouse gases cause or contribute to air pollution which endangers U.S. public health and welfare.<sup>51</sup> The findings, alone, do not substantively impose any requirements on industry or other entities, but were a prerequisite to issue the CPP subsequently.<sup>52</sup> However, the action was a prerequisite to finalizing EPA's greenhouse gas emission standards for cars and light-duty trucks, which were jointly promulgated by EPA incorporating vehicle fuel economy standards from the Department of Transportation in 2010.<sup>53</sup> Beginning in 2011, these mobile standards triggered requirements for stationary sources of greenhouse gasses (GHGs).<sup>54</sup>

In response to that trigger, there was a follow-on requirement that major new or modified stationary sources with greenhouse gas emissions automatically were subject to the Act's New Source Review, which is an added layer for new or modified sources in areas not in attainment with the NAAQS to install a stricter Lowest Achievable Emission Rate (LAER) technology, purchase emission offsets, and other requirements to restrict emissions. Eighty-four separate cases challenged the rule.<sup>55</sup> In 2010, the U.S. Court of Appeals for the D.C. Circuit denied industry and state motions to stay the endangerment finding and related EPA regulations, sustaining the agency's regulatory finding.<sup>56</sup>

The "categorical" emission limitations are intended, by an "ample margin of safety," to regulate pollutants that "may cause, or contribute to cause, an increase in mortality, or an increase in serious, irreversible,

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50. See ENVIRONMENTAL AND ENERGY STUDY INSTITUTE, FACT SHEET: TIMELINE OF EPA'S ACTIONS ON GREENHOUSE GASES, (Sept. 23, 2014), <http://www.eesi.org/papers/view/fact-sheet-timeline-of-epa-actions-on-greenhouse-gases>.

51. See *id.*; see also Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009) (those chemicals are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>)). EPA issued its finding in response to the 2007 Supreme Court decision in *Mass. v. EPA*, 549 U.S. 497, 533 (2007), that required the agency to decide the issue. *Id.* at 66,499.

52. See EPA, GREENHOUSE GASES, <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>.

53. *Id.*; See also Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 25,324 (May 7, 2010) <https://www.gpo.gov/fdsys/pkg/FR-2010-05-07/pdf/2010-8159.pdf>.

54. See FACT SHEET, *supra* note 50.

55. Robin Bravender, 16 'Endangerment' Lawsuits Filed Against EPA Before Deadline, N.Y. TIMES, Feb. 17, 2010, <https://archive.nytimes.com/www.nytimes.com/gwire/2010/02/17/17greenwire-16-endangerment-lawsuits-filed-against-epa-bef-74640.html>.

56. Coal. for Resp. Reg. v. EPA, 684 F.3d 103 (D.C. Cir. 2012) (per curiam), *aff'd in part, rev'd in part*; UARG v. EPA, 134 S. Ct. 2427 (2013).

or incapacitating reversible illness.”<sup>57</sup> As part of the CPP, EPA “proposed... performance standards for new power plants under Section [111(b) of the Clean Air Act,] standards for modified and reconstructed power plants under Section [111(b) of the Act,] and regulations under which states would submit plans to address CO<sub>2</sub> emissions from existing power plants under section [111(d) of the Act.]”<sup>58</sup> “Under Section 111 of the Clean Air Act, EPA can only [set] standards for... *existing* sources and units if it has [already] set standards for... new [units] in the same category” or of the same type.<sup>59</sup>

The Clean Air Act New Source Performance Standards (NSPS) under Section 111(d) require EPA to mandate that each exiting emission unit meeting the threshold size meet the Best System of Emission Reduction (BSER). For each state under EPA’s CPP that BSER is determined based on the mix of each state’s individual existing generating sources.<sup>60</sup> In some states this would demand up to a fifty percent cut in carbon intensity generation, and in other states, much less.<sup>61</sup> While the rule contained highly differentiated individualized CO<sub>2</sub> requirements for each state, each state was left to its own plan on how it would meet its quantitative power plant CO<sub>2</sub> emission reduction requirement.<sup>62</sup> EPA received more than a quarter million rulemaking comments in 2014 regarding the CPP proposed rule.<sup>63</sup> The final rule increased how much CO<sub>2</sub> emissions would have to be brought down nationwide from the 2005 baseline to 2030; from thirty percent to thirty-two percent.<sup>64</sup> There was a two-year delay for state required filing of state plans until 2018 with first actual reductions of CO<sub>2</sub> delayed until 2022.<sup>65</sup>

To generate electricity in the United States, EPA’s final regulation set a goal to substitute natural gas for coal.<sup>66</sup> EPA’s rule states that the “book life” of a coal plant is forty years, and that states in their

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57. See U.S.C. §§ 7408-10. This statutory language, as upheld by the court in *NRDC v. EPA*, 824 F.2d 1146 (D.C. Cir. 1987), emphasizes that these standards are intended to protect the public health and welfare with no consideration for the practicalities involved in their implementation through law.

58. Final Brief for Respondents Environmental Protection Agency at 3, *Murray Energy Corp. v. EPA*, No. 14-1112 & No.12-1151 at 8 (Mar. 9, 2015).

59. CONG. RESEARCH SERVICE, *EPA REGULATIONS: TOO MUCH, TOO LITTLE, OR ON TRACK?* R41561 at 20 (Dec. 30, 2016) [hereinafter *TOO MUCH, TOO LITTLE, OR ON TRACK?*].

60. EPA, FACT SHEET: CLEAN POWER PLAN OVERVIEW, <https://archive.epa.gov/epa/cleanpowerplan/fact-sheet-overview-clean-power-plan.html>.

61. See DeCotis, *supra* note 36.

62. *Id.*

63. See EPA, FACT SHEET: PROPOSED ACE RULE, [https://www.epa.gov/sites/production/files/2018-08/documents/ace\\_cost-benefit.pdf](https://www.epa.gov/sites/production/files/2018-08/documents/ace_cost-benefit.pdf).

64. See DeCotis, *supra* note 36.

65. 80 Fed. Reg. 64,661 (Aug. 3, 2015).

66. *Id.* at 64,756.

compliance filings should consider not allowing operation of older coal plants under this rule.<sup>67</sup> EPA utilized a planning assumption that states and regional independent system operators (ISOs) should take existing natural gas combustion turbines, which were running only at a national forty to fifty percent capacity factor compared to their full operation capabilities, and increase those facilities to an average seventy-five percent operating capacity factor to displace coal-fired power.<sup>68</sup> This demonstrates that natural gas-fired combined cycle facilities can operate at ninety-one percent availability.<sup>69</sup>

EPA's final rule eliminated energy efficiency as one of four state compliance building blocks to reduce CO<sub>2</sub> emission, retaining with improvement of coal-fired power facility heat rates, substitution of natural gas instead of coal electric facility operation, and construction of more renewable energy as state "building blocks" to comply with reduction requirements.<sup>70</sup> For those states which refused to comply, Federal Implementation Plans (FIPs) can be imposed by EPA as mandatory elements for the states.<sup>71</sup>

The EPA Clean Power Plan employs Section 111(d) of the Clean Air Act<sup>72</sup> to regulate existing power generation sources that are not regulated under other sections of the Act.<sup>73</sup> For new power plants, EPA also proposed new executive branch regulations for new CO<sub>2</sub>-emitting power plants under Section 111(b) of Clean Air Act.<sup>74</sup> Best System of Emission Reduction applies technology standards to affected plants, and as proposed in the CPP, would effectively make impossible use of conventional coal-burning power technology for new plants.<sup>75</sup> Conventional coal-fired electric generation facilities will not be able to

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67. *Id.* at 64,872.

68. *Id.* at 64,800.

69. *Id.* at 64,799-64,801.

70. *Id.* at 64,667.

71. Jeremy M. Tarr, *The Clean Air Act and Power Sector Carbon Standards: Basics of Section 111(d)*, NICHOLAS INST. FOR ENVTL. POLICY SOLUTIONS, DUKE UNIVERSITY, tbl. 1 (Sept. 2013), [https://nicholasinstitute.duke.edu/sites/default/files/publications/ni\\_pb\\_13-03.pdf](https://nicholasinstitute.duke.edu/sites/default/files/publications/ni_pb_13-03.pdf).

72. 42 U.S.C. § 7411(d).

73. Clean Power Plan Proposed Rule, EPA (June 2, 2014) (providing general information on plan, factsheets, and press releases); see also Megan Ceronsky, *Section 11(d) of the Clean Air Act—Cooperative Federalism and Performance-Based Standards*, ENVTL. DEF. FUND BLOG (May 20, 2014), <http://blogs.edf.org/climate411/2014/05/20/section-111d-of-the-clean-air-act-cooperative-federalism-and-performance-based-standards/>.

74. 42 U.S.C. § 7411(b).

75. 79 Fed. Reg. 1430 (Jan. 8, 2014). EPA previously proposed CO<sub>2</sub> emission standards for new power plants in 2012 but withdrew the proposed rule after taking comment. See 77 Fed. Reg. 22,392 (Apr. 13, 2012) (proposal); 79 Fed. Reg. 1352 (Jan. 8, 2014) (withdrawing proposal).

meet the CPP specified level.<sup>76</sup> The Clean Air Act’s NSPS must implement BSER, taking into account costs, environmental impact, and energy requirements.<sup>77</sup> The proposed “New Source Rule” issued by EPA establishes separate performance standards for new coal-and gas-fired power plants.<sup>78</sup>

EPA determined that carbon capture and storage (“CCS”)<sup>79</sup> was an “adequately demonstrated” technology that qualified as BSER for purposes of the CPP.<sup>80</sup> Many consider this unproven in the United States.<sup>81</sup> At the time of the rule’s promulgation, no operating U.S. plants used CCS to capture necessary amounts of pollution.<sup>82</sup>

EPA established a regulatory threshold forty percent lower than current “best-in-class” coal turbine technologies for new coal-fired electric generating plants in the CPP.<sup>83</sup> This is a level that current technology for new coal facilities could not meet.<sup>84</sup> EPA concurred without regrets that no new U.S. coal-fired plants would be built between 2015-2020 that could meet its new standards.<sup>85</sup> The effect is that the CPP, by default, indirectly substitutes operation of natural gas and renewable energy generation for existing coal-fired power.<sup>86</sup> EPA’s

76. Seth Hilton, *The Impact of California’s Global Warming Legislation on the Electric Utility Industry*, 19 ELECTRICITY J. 10 (2006).

77. See STEVEN FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS 196-97 (Wolters Kluwer, 7th ed. 2016) (NSPS BSER requirement).

78. “New source” does not include existing sources undertaking modifications or reconstructions, and certain projects currently under development.

79. EPA ARCHIVE, <https://archive.epa.gov/epa/sites/production/files/2016-04/documents/cpp-presentation.pdf>; see also EPA, Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, Final Rule, 80 Fed. Reg. 64509 (Oct. 23, 2015).

80. See EEA TECHNICAL REPORT, AIR POLLUTION IMPACTS FROM CARBON CAPTURE AND STORAGE (CCS), <https://www.eea.europa.eu/publications/carbon-capture-and-storage>. Facilities deploying CCS technology can filter and capture CO<sub>2</sub> from the emission waste stream and pump it into geologic formations or use it to extract coal-bed methane or oil in depleted or diminished oil reservoirs. EPA cites four projects currently under development that will deploy some type of CCS.

81. See American Geoscience Institute, *Carbon Capture and Storage Debate Heats Up*, <https://www.americangeosciences.org/policy/news-briefs/carbon-capture-and-storage-debate-heats>.

82. TOO MUCH, TOO LITTLE, OR ON TRACK?, *supra* note 59.

83. See ELECTRIC POWER RESEARCH INSTITUTE, CAN FUTURE COAL POWER PLANTS MEET CO<sub>2</sub> EMISSION STANDARDS WITHOUT CARBON CAPTURE & STORAGE?, (Oct. 2015), [https://www.ieca-us.com/wp-content/uploads/EPRI\\_Can-Future-Coal-Power-Plants-Meet-CO2-Emission-Standards-Without-Carbon-Capture-Storage\\_10.2015.pdf](https://www.ieca-us.com/wp-content/uploads/EPRI_Can-Future-Coal-Power-Plants-Meet-CO2-Emission-Standards-Without-Carbon-Capture-Storage_10.2015.pdf).

84. *Id.*; See 80 Fed. Reg. 64,661, 64,709; see also STEVEN FERREY, LAW OF INDEPENDENT POWER § 6:7.40 n.9 (Thomson Reuters, 45th ed. 2018).

85. TOO MUCH, TOO LITTLE, OR ON TRACK?, *supra* note 59.

86. The EPA utilizes a planning assumption that states an independent system operators (ISOs) should take natural gas combustion turbines, whose history demonstrates that they can operate at ninety-one percent availability but which are running only at a national forty to fifty

final CPP regulation reinforces that this rule substitutes natural gas for coal for the generation of electricity.<sup>87</sup>

## 2. The Legal Challenge

Federal Energy Regulatory Commission (FERC) Commissioner Tony Clark criticized the CPP injecting environmental factors into how power plants are allowed to run, predicting “a jurisdictional train wreck” resulting from the CPP under the Clean Air Act attempting to regulate carbon emissions.<sup>88</sup> FERC Commissioner Philip Moeller testified that the Obama Administration carbon regulations were “an enforcement regime that would be awkward at best, and potentially very inefficient and expensive.”<sup>89</sup> Commissioner Moeller testified that the CPP rules would cause “a shift from traditional [executive agency] economic dispatch to environmental dispatch.”<sup>90</sup> The FERC commissioners “expressed skepticism with the EPA’s assumption that enough natural gas pipelines will be built over the next five to ten years to allow natural gas-fired generation to replace thousands of megawatts of retiring coal generation” as the main prong of the CPP.<sup>91</sup>

Seventeen state attorneys general filed comments highlighting “numerous legal defects” and system reliability issues in EPA’s proposal to regulate power plant emissions under Section 111(d) of the Clean Air Act.<sup>92</sup> The U.S. Chamber of Commerce characterized the Obama Administration EPA regulations as “a series of one-sided, politically-charged regulations that are intended to take the place of legislation that cannot achieve a consensus in the Congress.”<sup>93</sup> More than half the states thereafter sued EPA regarding its authority to issue these regulations.<sup>94</sup>

The litigation on the CPP attacked its regulation of both existing and new coal-fired carbon-emitting power plants. While the “marque”

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percent capacity factor and increase those to a seventy-five percent capacity factor to displace coal-fired power. 80 Fed. Reg. 64,661, 64,799.

87. 80 Fed. Reg. 64,661 (Oct. 23, 2015).

88. Garner, *supra* note 1.

89. *Id.* Commissioner “Moeller stated that the biggest challenge in implementing the proposed rule is that electricity markets are interstate in nature,” while EPA has a state-by-state approach for emissions reductions. *Id.*

90. *Id.*

91. *Id.*

92. Herman Trabish, *Comments are in on the EPA’s Clean Power Plan (the attorneys general of the 17 states that sued were from Oklahoma, West Virginia, Nebraska, Alabama, Florida, Georgia, Indiana, Kansas, Louisiana, Michigan, Montana, North Dakota, Ohio, South Carolina, South Dakota, Utah, and Wyoming)*, UTILITY DIVE, <https://www.utilitydive.com/news/comments-are-in-on-the-epas-clean-power-plan/338783/>.

93. U.S. CHAMBER OF COMMERCE, REGULATORY AREAS, ENERGY, AND THE ENVIRONMENT, <http://www.uschamber.com/regulations/areas>.

94. Trabish, *supra* note 92.

plaintiffs amongst the various lawsuits against EPA’s CPP were Murray Energy and the states of Texas and West Virginia, there were numerous other parties’ lawsuits that in 2016 were consolidated with challenges from twenty-eight states and more than 120 companies and organizations into one multi-party case, *State of West Virginia, et al. v. EPA*.<sup>95</sup> This included more than half the states, as well as various industries and additional parties that filed petitions in the case.<sup>96</sup> Parties supporting EPA included eighteen states plus sixty cities and towns participating as interveners.<sup>97</sup> Twenty-seven states sued EPA on promulgation of the CPP rule,<sup>98</sup> alleging a violation of the Clean Air Act.<sup>99</sup>

There is no federal case law, nor any Environmental Protection Agency rules, which have, or can, resolve direct conflicts regarding how one counts environmental ‘benefits’ against the cost imposed on the operation of power generation units to reduce polluting operation.<sup>100</sup> The closest precedent is provocative Supreme Court *dicta* from forty years ago in *Union Electric*,<sup>101</sup> wherein the Court held that an owner of a fossil fuel-fired power generation facility can *always* “shut down its plant and curtail electric service” to meet any imposed environmental requirements.<sup>102</sup>

95. COMPETITIVE ENTERPRISE INSTITUTE, CHALLENGING THE CLEAN POWER PLAN, <https://cei.org/litigation/challenging-clean-power-plan-cei-et-al-v-epa>.

96. Additional parties included: Oklahoma, North Dakota, Int’l Brotherhood of Boilermakers, Murray Energy Corp., NMA, ACCCE, UARG/APPA, Alabama Power Co. et al, CO2 Task Force of the Fla. Elect. Power Coordinating Grp., Montana-Dakota Utils. Co., Tri-State Generation & Transmission Ass’n., United Mine Workers, NRECA et al., Westar Energy, NorthWestern Corp., Nat’l Ass’n of Home Builders, Chamber of Commerce et al., Ass’n of Am. Railroads, Mississippi DEQ, Luminant Generation Co., Basin Electric Power Coop., Int’l Brotherhood of Electrical Workers, Energy & Env’t Legal Inst., Entergy Corp., LG&E/KU, West Virginia Coal Ass’n, Newmont Nevada Energy Inv./Newmont USA, Kansas City Bd. of Pub. Utils., North Am. Coal Corp., Indiana Util. Grp., Louisiana Pub. Serv. Comm’n, Genon Mid-Atlantic et al., Prairie State Generating Co., Minnesota Power, Denbury Onshore, Energy-Intensive Mfrs.’ Working Grp. on Greenhouse Gas Reg., Nat’l All. of Forest Owners, Biogenic CO2 Coal., Local Gov’t Coal. for Renewable Energy, Am. Forest & Paper Ass’n/Am. Wood Council, Competitive Enter. Inst. et al.

97. These included: California, Connecticut, Delaware, District of Columbia, Hawaii, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Mexico, New York, Oregon, Rhode Island, Virginia, Vermont, and Washington), sixty municipalities from twenty-eight different states, with a total population of thirty-three million, companies including Amazon, Apple, Google, and Microsoft, the Am. Wind Energy Ass’n & Solar Energy Indus. Ass’n, 208 Members of Cong. (157 Representatives; thirty-six Senators; fifteen former members).

98. *Murray Energy Corp. v. EPA*, 788 F.3d 330, 331-32 (D.C. Cir. 2015).

99. 42 U.S.C. § 7411(d).

100. Steven Ferrey, *Broken at Both Ends: The Need to Reconnect Energy and Environment*, 65 SYRACUSE L. REV. 54, 56-58 (2015).

101. *Union Elec. v. EPA*, 427 U.S. 246 (1976).

102. *See id.*



In its 2009 *Riverkeeper* decision,<sup>103</sup> involving the entrainment of aquatic species on power plant cooling water intake structures, the Supreme Court held that Congress, in Clean Water Act Section 316(b), did not categorically forbid EPA from comparing costs to benefits when determining what is the best technology available for minimizing adverse environmental impacts of power plant cooling water intake structures.<sup>104</sup> EPA was left the authority to decide not to engage in such analysis.<sup>105</sup> Congressional testimony in 2014 by FERC Commissioner Clark characterized the conflict between proposed environmental regulation in the CPP to assist climate goals and the pressing counter requirement to protect power system reliability and resiliency to be “a jurisdictional train wreck.”<sup>106</sup>

When the CPP regulation was proposed in 2015, Senator Mitch McConnell sent a letter to the National Governors Association urging states to not submit required plans complying with those regulations once they were promulgated.<sup>107</sup> When the proposed CPP rule was initially challenged at the stage of the proposed regulation, the issue of final agency action went to the federal circuit court. The federal D.C. Circuit Court of Appeals held that only final agency action is subject to judicial review:<sup>108</sup>

Proposed rules meet neither of the two requirements for final agency action: (i) They are not the “consummation of the agency’s decision-making process,” and (ii) they do not determine “rights or obligations,” or impose “legal consequences.”<sup>109</sup>

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103. *Entergy Corp. v. Riverkeeper*, 556 U.S. 208 (2009). It did not *require* EPA to employ cost-benefit analysis, however EPA must provide a reasoned explanation if it should choose to regulate in a way that would do more harm than good or provide a reasoned explanation why the agency is indifferent to that outcome. *See id.*

104. *Id.* at 223.

105. *Id.*

106. Garner, *supra* note 1.

107. Letter from Senator Mitch McConnell to National Governors Association (Mar. 19, 2015),

[http://www.mcconnell.senate.gov/public/index.cfm?p=newsletters&ContentRecord\\_id=d57eba06-0718-4a22-8f59-1e610793a2a3&ContentType\\_id=9b9b3f28-5479-468a-a86b-10c747f4ead7&Group\\_id=2085dee5-c311-4812-8bea-2dad42782cd4](http://www.mcconnell.senate.gov/public/index.cfm?p=newsletters&ContentRecord_id=d57eba06-0718-4a22-8f59-1e610793a2a3&ContentType_id=9b9b3f28-5479-468a-a86b-10c747f4ead7&Group_id=2085dee5-c311-4812-8bea-2dad42782cd4).

108. *Murray*, 788 F.3d 304. Murray argued that their business would be negatively affected by the plan, and they had incurred costs in anticipation of the final rulemaking. *Id.* at 335.

109. *Id.* at 334-35. *Bennett v. Spear*, 520 U.S. 154, 177-78 (1997) (internal quotation marks omitted); *see also* *Am. Portland Cement All. v. EPA*, 101 F.3d 772, 777 (D.C. Cir. 1996) (“a proposed regulation is still in flux,” so “review is premature”) (internal quotation marks omitted); *Action on Smoking & Health v. Dep’t of Lab.*, 28 F.3d 162, 165 (D.C. Cir. 1994) (“Agency action is final when it imposes an obligation, denies a right, or fixes some legal relationship,” and an agency’s “proposed rulemaking generates no such consequences.”) (internal quotation marks omitted).

Consequently, the initial complaint in *In re Murray Energy Corporation* was dismissed in June 2015 by the D.C. Circuit because the EPA rule was not final at that time and administration remedies had not yet been exhausted, and thus the court lacked the authority to rule on its legality.<sup>110</sup> On the challenge to the final regulation, the Obama Administration raised procedural defenses to attempt to avoid a decision on the merits. EPA argued that complainant Murray lacked Article III standing because Murray was unable to show an individualized injury from the proposed rule.<sup>111</sup> To establish Article III standing, an injury must be concrete, particularized, and actual or imminent; fairly traceable to the challenged action; and redressable by a favorable ruling.<sup>112</sup>

A petitioner who asserts standing based on the expectation of future injury confronts a more rigorous burden to establish standing.<sup>113</sup> Based on previous case law, EPA stated that additionally, when the petitioner is not himself the object of the government action or inaction he challenges, standing is not precluded, but it is ordinarily more difficult to establish.<sup>114</sup> EPA stated that the Court had long held that an administrative agency’s initiation of rulemaking through a notice and comment process did not impair the rights of interested parties, so as to give rise to Article III standing, even if such parties would have been directly regulated by a final rule.<sup>115</sup>

EPA also argued that any Murray injury was speculative and did not confer standing. EPA stated that Murray’s claim was too speculative to support standing because it was based on predicting the substantive content of one possible outcome of the rulemaking.<sup>116</sup> EPA argued that the Article III standing cases Murray relied on involved challenges to final rules promulgated after notice and comment, not proposed rules published for the purpose of soliciting public comments, or to agency directives that were not subject to notice-and-comment.<sup>117</sup>

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110. *Id.* at 334 (“[A] proposed rule is just a proposal. In justiciable cases, this Court has the authority to review the legality of final agency rules. We do not have authority to review proposed agency rules.”).

111. Appellate Brief at 9, *Murray Energy Corp. v. EPA*, 788 F.3d 330 (2015) (Nos. 14-1112, 14-1151), 2015 WL 1022486.

112. *Id.* at 10; *Murray*, 788 F.3d 330.

113. Appellate Brief at 10-11, *Murray Energy Corp. v. EPA*, 788 F.3d 330 (2015) (Nos. 14-1112, 14-1151), 2015 WL 1022486.

114. *Id.* at 11.

115. *Id.*

116. *Id.* at 12. The EPA stated that at that point in time, when EPA was still evaluating and had not yet responded to the millions of comments it received, any predictions about what state specific guidelines EPA might have adopted in a final rule, let alone what requirements each state, in turn, independently may impose on power plants pursuant to such guidelines, were pure conjecture. *Id.* at 13.

117. *Id.*

*B. The Congressional Review Act*

Aside from judicial challenge, there is a revisionary option for the Congress. The Congressional Review Act (CRA)<sup>118</sup> created in the Congress the discretion and legal ability to unwind recent regulatory orders or rules. A recent example of this is the Trump Administration and Congress' attempts to undo critical accomplishments from the last months of the Obama administration.<sup>119</sup> After a major rule is published in the Federal Register, it takes effect sixty days later.<sup>120</sup> Congress can disapprove a rule through a joint resolution under the Congressional Review Act, retroactive to the date the rule became effective.<sup>121</sup>

The Congressional Review Act allows Congress to amend or disapprove proposed agency actions by passing a joint resolution after the executive action becoming final.<sup>122</sup> It has almost never been used, as it would require disapproval by both houses of Congress and either the signature of the President or an override of a veto by two-thirds of both houses.<sup>123</sup> If a rule proposed by one political administration is rescinded by the subsequently elected political administration, there must be a justification why such rescission is not arbitrary or capricious or an abuse of discretion.<sup>124</sup>

Before any rule covered by the CRA can take effect, the federal agency that promulgates the rule must submit it to both houses of Congress and the Government Accountability Office (GAO). If Congress passes a joint resolution disapproving the rule under

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118. See Congressional Review Act, 5 U.S.C. § 801. The Congressional Review Act was created as part of the Small Business Regulatory Enforcement Fairness Act in 1996, 5 U.S.C. 8. It creates an automatic stay for sixty days for congressional review. *Id.* If disapproved by both houses of Congress and signed by the President or approved by the Congress over the President's veto, the rule is null and void and there is a prohibition of issuing a similar rule. *Id.* Until recently, it had only successfully employed once since enacted in 1996, pertaining to a Clinton Administration OSHA rule in 2000, overturned during the subsequent Bush Administration. *Id.*

119. See Lauren Stephenson, *The Little-Known Law Letting Trump Repeal Obama's Regulations*, NEWSY, Apr. 5, 2017, <http://www.newsy.com/stories/trump-uses-congressional-review-act-to-repeal-regulations/>. Through the CRA, Trump signed eleven resolutions to repeal prior administration regulations in his first 100 days. President Donald Trump signed more than a dozen resolutions to overturn rules issued in the last half of 2016 using the Congressional Review Act, an historic number for any president but affecting only a tiny fraction of the regulations.

120. 5 U.S.C. § 801(a)(3)(A).

121. 5 U.S.C. § 801(f).

122. 5 U.S.C. §§ 801-808.

123. Stuart Shapiro, *The Congressional Review Act, Rarely Used and (Almost Always) Unsuccessful*, THE HILL, Apr. 17, 2015, <http://thehill.com/blogs/pundits-blog/lawmaker-news/239189-the-congressional-review-act-rarely-used-and-almost-always>.

124. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 41-42 (1983).

procedures provided by the CRA, and it becomes law, the rule cannot take effect or continue in effect.<sup>125</sup> The agency may not reissue either that rule or any substantially similar one, except under authority of a subsequently enacted law.<sup>126</sup>

Procedurally, the CRA protects discretion of Congress. A CRA motion to consider a disapproval resolution is not debatable and thus it cannot be filibustered by a minority of Senators.<sup>127</sup> Once the Senate considers the CRA disapproval resolution, the expedited procedure incorporated in the CRA protects the ability of the Senate to continue and complete its action, with debate limited to ten hours without any amendments.<sup>128</sup>

The CRA does not give Congress any extra authority. Indeed, Congress can pass legislation whenever it wants to repeal existing regulations, since those regulations are themselves derivative of earlier congressional enactments. Instead, what the CRA does is—for a limited time—suspend much of the deliberative process, including committee consideration, conference committees to resolve differences between the two chambers’ respective legislation, and one procedural chokepoint—the Senate filibuster. A complex “carryover” provision in the CRA grants it even more reach. This provision enables a new session of Congress to reach back into the preceding presidential administration’s term so that it can apply the CRA’s expedited legislative procedures to rules that were finalized in the last several months of that administration.<sup>129</sup>

The CRA creates an accessible legislative tool, valid for a discrete period, suspending much of the deliberative process otherwise necessary by the first branch of government to undo a unilateral executive branch regulation—including committee consideration, conference committees to resolve differences in decisions between the two legislative chambers’

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125. 5 U.S.C. §§ 801(f), 802(d).

126. 5 U.S.C. § 801(b)(2). For the resolution to become law, the President must sign it or allow it to become law without his signature. Congress must override a presidential veto. *See* OFFICE OF THE FEDERAL REGISTER, A GUIDE TO THE RULEMAKING PROCESS, [https://www.federalregister.gov/uploads/2011/01/the\\_rulemaking\\_process.pdf](https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf).

127. 5 U.S.C. § 802(d)(4); U.S. CONST. art. I, § 7.

128. *See* PAUL LARKIN, HERITAGE FOUNDATION, JUDICIAL REVIEW UNDER THE CONGRESSIONAL REVIEW ACT, Mar. 9, 2017, <https://www.heritage.org/the-constitution/report/judicial-review-under-the-congressional-review-act>. This ensures that the Senate CRA disapproval resolution will remain substantively identical to the House joint resolution disapproving the same rule, so that no filibuster is possible on the resolution itself. Once a motion to proceed is adopted, the CRA resolution becomes “the unfinished business of the Senate until disposed of,” and a non-debatable motion may be offered to limit the time for debate. The CRA provides that at the conclusion of debate, the Senate automatically proceeds to vote on the resolution. *Id.*

129. 5 U.S.C. § 801(d)(1)(B).

regarding action on legislation, as well as the procedural ‘chokepoint’ of the Senate filibuster. If a rule is challenged in court, the executive branch can postpone the effective date of a rule.<sup>130</sup> A postponement by the executive branch for an indefinite period has effect similar to a new rule revoking the regulation, which must be done in compliance with the Administrative Procedure Act.<sup>131</sup> If a rule proposed by one political administration is rescinded by the subsequent political administration, there must be a justification why such rescission is not arbitrary or capricious or an abuse of discretion.<sup>132</sup> The CRA enables a new session of Congress to “reach back” into the preceding presidential administration’s term so that it can apply the CRA’s expedited legislative procedures to negate rules that were finalized in the last several months of that prior presidential administration.<sup>133</sup> So the CRA function as an expedited tool that allows the first branch of government to go down its checklist of recently passed regulations and negate on an expedited, stream-lined basis those of which it disapproves.

There is history to the Congressional Review Act and the CPP. In the 111<sup>th</sup> Congress, on December 15, 2009, four identical resolutions were introduced to disapprove the first of EPA’s GHG rules, the Endangerment Finding for carbon emissions, which was the necessary first step to justify regulating CO<sub>2</sub> and other carbon emissions as a new category of pollutants that otherwise are not regulated by the Clean Air Act.<sup>134</sup> Of the four, one proceeded to a vote:<sup>135</sup> on June 10, 2010, the Senate voted forty-seven to fifty-three not to take up the resolution.<sup>136</sup> The CRA applies to a “rule.”<sup>137</sup> There is no distinction in the CRA between proposed and final rules.<sup>138</sup> Senator McConnell argued that it

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130. Administrative Procedure Act, 5 U.S.C. § 705.

131. See FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS, *supra* note 77, at 48.

132. See *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 41-42 (1983).

133. 5 U.S.C. § 801(d)(1)(B).

134. One of these was in the Senate, S. Res. 26, 111th Cong. (2009); three were in the House, H.R. Res. 66, 111th Cong. (2009); H.R. Res. 76, 111th Cong. (2009); and H.R. Res. 77, 111th Cong. (2009).

135. S. Res. 26.

136. See P.L. 107-5 (2001), 65 Fed. Reg. 68,261 (disapproving an OSHA rule on ergonomics). A motion to disapprove a resolution under the CRA is treated as not debatable, and it is not subject to delay by filibuster. The CRA does not allow amendments to it, and limits debate on it to ten hours. See RICHARD S. BETH, CONG. RESEARCH SERVICE, DISAPPROVAL OF REGULATIONS BY CONGRESS: PROCEDURE UNDER THE CONGRESSIONAL REVIEW ACT, (Oct. 10, 2001), <https://www.senate.gov/CRSPubs/316e2dc1-fc69-43cc-979a-dfc24d784e08.pdf>.

137. Rules adopt the meaning contained in 5 U.S.C. § 804(3).

138. Section 551 does not directly address the definition of a proposed rule or the difference between a proposed and final rule, stating that a rule is “the whole or part of an

should also apply to proposed rules.<sup>139</sup> Until the current Congress, the CRA was only invoked twice in its two decades.<sup>140</sup> There is no case law examining the applicability of the CRA to proposed rules. S.J. Res. 30 was introduced in 2017 with dozens of cosponsors; it disapproved of the EPA’s CPP proposed rule regarding New Source Performance Standards for electric generating units that had been published by the Obama Administration in the Federal Register in 2014<sup>141</sup>

Proposed in Congress in 2016, and reintroduced in 2017, was the Separation of Powers Restoration Act to address unbalanced power favoring the executive branch; it authorizes courts reviewing agency actions to decide *de novo* all relevant questions of law, including the interpretation of constitutional and statutory provisions and rules made by agencies.<sup>142</sup> This would change the jurisprudence of administrative law in the United States. It requires no deference to the agency’s interpretation regarding all relevant questions of law, thus eliminating *Chevron* and *Auer*,<sup>143</sup> referred to as *Auer* deference in judicial review.<sup>144</sup>

Introduced in the Congress in 2017 with bipartisan sponsorship in the U.S. Senate is the Regulatory Accountability Act, which would require agency regulations to have criteria for cost-benefit and cost-effectiveness applied as a prerequisite to promulgation.<sup>145</sup> These

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agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy. . .” 5 U.S.C. § 551. There also is no case precedent examining the applicability of the CRA to proposed rules. § 805 of the CRA prohibits judicial review of determinations, findings, actions, or omissions under the act. 5 U.S.C. § 805. Section 802 specifies that the CRA is “an exercise of the rulemaking power of the Senate and House of Representatives, respectively, and as such it is deemed a part of the rules of each House.” 5 U.S.C. § 802. When requested by members of Congress, the applicability of the CRA is conducted by GAO, which is required under Section 801 of the CRA to submit a report on each major rule to the committees of jurisdiction in the House and Senate. 5 U.S.C. § 801(a)(2)(A).

139. Letter of Senator Mitch McConnell to Hon. Gene L. Dodaro, Comptroller General of the United States (Jan. 16, 2014) <http://4cleanair.org/Documents/McConnell-Letter-%20to-GAO-1-16-14.pdf>.

140. See 65 Fed. Reg. 68,261, P.L. 107-5 (2001) (disapproving of an Occupational Safety and Health Administration Rule regarding ergonomics).

141. EPA, Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units, Proposed Rule, 79 Fed. Reg. 1430 (Jan. 8, 2014).

142. H.R. 76.

143. *Auer v. Robbins*, 519 U.S. 452, 457-58 (1977) (Supreme Court deferred to agency interpretation of its own existing regulation if the regulation is ambiguous and the interpretation is not plainly erroneous or inconsistent with the regulation, and when initially provided to court in a brief). There has been subsequent criticism of *Auer* deference. See *Perez v. Mortgage Bankers Ass’n*, 135 S. Ct. 1199, 1212 (2015); *Talk Am., Inc. v. Mich. Bell Tel. Co.* 564 U.S. 50, 59 (2011); *Christopher v. SmithKline Beecham Corp.*, 132 S. Ct. 2156, 2166 (2012).

144. See *infra* Section IV.B.

145. S. Res. 951, 115th Cong. (2017-2018).

changes have a “pervasive focus on costs.”<sup>146</sup> Under the bill, agencies would be required to select the best regulatory choice measured by the monetary analysis based on the best available data.<sup>147</sup> Quasi-independent agencies are brought under these limitations: U.S. Office of Management and Budget (OMB) jurisdiction would extend to the regulations of the independent quasi-judicial agencies, such as FERC. Any or all of this would affect executive branch environmental and energy regulation, going forward.

### III. EXECUTIVE BRANCH REGULATION: TRANSITION AND REPEAL

#### A. Transition in Administrations

CPP allows state plans, which have not yet been submitted to EPA for the 2028 deadline, to administer CO<sub>2</sub> controls “beyond the fence line”<sup>148</sup> of each affected project’s deeded metes and bounds.<sup>149</sup> There was a change in such off-site compliance mechanisms with the change of administrations. The Trump Administration in the fall of 2017 declared that the CPP was not permissible because the Clean Air Act requires individual source regulation, rather than regulation “beyond the fence line” or off-site and away from the emitting pollution source that is subject to Clean Air Act regulation.<sup>150</sup> In other words, individual source controls must be administered, rather than a generic command to states to find any way they want to reduce carbon emissions.

Of the three “building blocks” available under the CPP for states to meet the carbon emission standards, the Trump Administration’s has emphasized that inside-the-fence measures must be implemented at each

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146. See FED’N OF AM. SCIS., EPA’S CLEAN POWER PLAN AND LIKELY LEGAL CHALLENGES (Aug. 11, 2015), <https://fas.org/sgp/crs/misc/epa-clean.pdf>; see also William Buzbee, *Regulatory ‘Reform’ that is Anything But*, N.Y. TIMES, June 15, 2017, [https://www.nytimes.com/2017/06/15/opinion/regulatory-reform-bills-congress-trump.html?action=click&pgtype=Homepage&clickSource=story-heading&module=opinion-c-col-right-region&region=opinion-c-col-right-region&WT.nav=opinion-c-col-right-region&\\_r=1](https://www.nytimes.com/2017/06/15/opinion/regulatory-reform-bills-congress-trump.html?action=click&pgtype=Homepage&clickSource=story-heading&module=opinion-c-col-right-region&region=opinion-c-col-right-region&WT.nav=opinion-c-col-right-region&_r=1).

147. See Buzbee, *supra* note 146.

148. “Inside the fence” is used to describe pollution control applied to the emission source itself, such as on the power generation source in its combustion processes or immediate capture or neutralization of regulated emissions. “Outside the fence” is used to describe pollution control away from the regulated pollution source, the credits associated with which are applied or purchased to offset on paper the pollutants emitted by the pollution sources. This latter mechanism allows pollution credit trading and creates more options for minimizing emissions.

149. Buzbee, *supra* note 146.

150. See *infra* Section III.B.

power plant emissions source.<sup>151</sup> According to the Trump Administration, Section 111(d) of the Clean Air Act does not allow outside-the-fence measures which target other than application of BSER to the emitting sources that are regulated.<sup>152</sup> Such an emphasis on inside-the-fence measures effectively discards two of the three CPP building blocks of the Obama Administration CPP: Dispatching and running gas-fired power plants in lieu of operating coal-fired plants which were directly CPP-targeted, and shifting generation to wind and solar plants.<sup>153</sup> Incentives for renewable or other technologies do not limit the actual emissions output of the specifically regulated fossil generation sources that the Clean Air Act regulates.

Quite apart from the pending, and now long-ongoing, legal challenges which predated the 2016 Presidential election, the change from the Obama to the Trump Administrations placed the CPP at non-judicial risk. Regulations enacted by one executive branch can be repealed by the next executive branch. EPA promulgated regulations in 2017 to change the value of saving emissions of CO<sub>2</sub>.<sup>154</sup> Executive Order 13783 issued on March 28, 2017, directed EPA to eliminate the CPP.<sup>155</sup> Prior to that, the Executive Order 13371 issued on January 30, 2017 directed agencies to eliminate two existing regulations for every one new regulation issued.<sup>156</sup> A lawsuit by the environmental organization Natural Resources Defense Council (NRDC) alleges that the new Order exceeds the President’s constitutional authority, violating his duty under

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151. EPA, ANPR to Replace Clean Power Plan, 82 Fed. Reg. 61,507 at 61,512 (Dec. 28, 2017) (Emphasis of application *at or to an existing power plant at the regulated source*, based on a physical or operational change to a building, structure, facility, or installation at that source).

152. *Id.* at 61,511.

153. *Id.* at 61,516.

154. Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 48,035 at 48,037 (proposed Oct. 16, 2017), [https://www.federalregister.gov/documents/2017/10/16/2017-22349/repeal-of-carbon-pollution-emission-guidelines-for-existing-stationary-sources-electric-utility?link\\_id=19&can\\_id=c66b4c63149f2740dbf1f9b5fe4fed84&source=email-weekly-actions-5-ways-to-protect-what-matters-to-you-most&email\\_referrer=&email\\_subject=weekly-actions-5-ways-to-protect-what-matters-to-you-most](https://www.federalregister.gov/documents/2017/10/16/2017-22349/repeal-of-carbon-pollution-emission-guidelines-for-existing-stationary-sources-electric-utility?link_id=19&can_id=c66b4c63149f2740dbf1f9b5fe4fed84&source=email-weekly-actions-5-ways-to-protect-what-matters-to-you-most&email_referrer=&email_subject=weekly-actions-5-ways-to-protect-what-matters-to-you-most). “This approach shifts the focus to the domestic (rather than global) social cost of carbon, and employs both 3 percent and 7 percent discount rates.” *Id.* at 48,043.

155. Exec. Order No. 13,783, Promoting Energy Independence and Economic Growth, 3-5 (Mar. 28, 2017).

156. Exec. Order No. 13,771, Reducing Regulation and Controlling Regulatory Costs, at 42,751. Executive Order 13771 directs that no agency may issue a new rule unless the agency offsets the costs of the new rule by rescinding at least two existing ones.



the “Take Care” Clause of the Constitution,<sup>157</sup> and directs federal agencies to engage in unlawful actions.<sup>158</sup>

Under the federal Administrative Procedure Act, EPA is legally bound to issue a new, separate, proposed rule any time it wishes to change or repeal any prior EPA regulation.<sup>159</sup> Moreover, the wholesale removal of a regulation may constitute a “major Federal action significantly affecting the quality of the human environment,” thereby triggering the need for an Environmental Impact Statement (EIS) under the National Environmental Policy Act.<sup>160</sup> Federal circuit courts of appeal have required on changing regulations:

Changes in course \* \* \* cannot be solely a matter of political winds and currents. The Administrative Procedure Act requires that the pivot from one administration’s priorities to those of the next be accomplished with at least some fidelity to law and legal process. Otherwise, government becomes a matter of the whim and caprice of the bureaucracy, and regulated entities will have no assurance that business planning predicated on today’s rules will not be arbitrarily upset tomorrow.<sup>161</sup>

In November 2017, the Trump Administration announced a repeal of the CPP.<sup>162</sup> In the last few days of 2017, EPA issued an Advanced Notice of a Proposed Rulemaking to Replace the Clean Power Plan.<sup>163</sup> The Regulatory Impact Analysis (“RIA”) that will accompany the final repeal when published in 2018, is itself not generally challengeable as to its costs, benefits, and conclusions, because RIAs are not required by statute, but only by executive order.<sup>164</sup> However, the challengers’ argument in the long-pending litigation against the CPP before the D.C.

157. U.S. CONST. art. II, § 3.

158. Pub. Citizen, Inc. v. Donald Trump, Civil Action No. 17-253 (RDM) (D.D.C. 2017).

159. 5 U.S.C. § 551; see ABA, RULEMAKING SECTION 553 OF THE ADMINISTRATIVE PROCEDURE ACT, [https://www.americanbar.org/content/dam/aba/events/administrative\\_law/2011/11/2011\\_fall\\_administrativelawconference/rulemaking\\_chapter\\_2011.authcheckdam.pdf](https://www.americanbar.org/content/dam/aba/events/administrative_law/2011/11/2011_fall_administrativelawconference/rulemaking_chapter_2011.authcheckdam.pdf).

160. See 42 U.S.C. § 4332(2)(C); see EPA, NATIONAL ENVIRONMENTAL POLICY REVIEW PROCESS, <https://www.epa.gov/nepa/national-environmental-policy-act-review-process>.

161. N.C. Growers’ Ass’n v. UFW, 703 F.3d 755, 772 (4th Cir. 2012) (Wilkinson, J., concurring).

162. Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 51,787 (Nov. 8, 2017).

163. EPA, *supra* note 151, at 61,507 (To utilize the best system of emission reduction (BSER) *at or to an existing power plant, at the source-specific level*, based on a physical or operational change to a building, structure, facility, or installation.) *Id.* at 61,512.

164. DEPT. OF HEALTH & HUMAN SERVS., REGULATORY IMPACT ANALYSIS: A PRIMER (Jan. 13, 2017) [https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/regpol/circular-a-4\\_regulatory-impact-analysis-a-primer.pdf](https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/regpol/circular-a-4_regulatory-impact-analysis-a-primer.pdf).

Circuit claimed alleged flaws in the original Obama Administration EPA RIA<sup>165</sup>

*B. The Legal Basis of Regulatory Repeal*

The Trump Administration EPA in 2017 switched gears and based its proposed repeal of the CPP not on a change in policy goals, nor on any of the critical cost considerations, which under the recent Supreme Court decision in *Michigan*, could be a basis for reconsideration.<sup>166</sup> Rather, EPA in 2017 initiated its still in-progress regulatory repeal of the CPP based on a legal concern that the Clean Power Plan violated the Clean Air Act by regulating “outside the fence line” of individual power plant sources that are subject to the Clean Air Act.<sup>167</sup> In taking this step to resolve its perceived violation, EPA did not repeal its 2009 Clean Air Act “Endangerment” finding related to greenhouse gases which requires EPA to regulate CO<sub>2</sub> emissions from the power sector consistent with the Clean Air Act’s Prevention of Significant Deterioration “Best System for Emissions Reductions.”<sup>168</sup> The Endangerment Finding found that GHGs endanger public health and welfare, and GHGs from mobile sources, in the form of motor vehicle engine emissions, contribute to that endangerment.<sup>169</sup>

There are options to repeal or to repeal and replace the CPP. If the Trump Administration EPA does pursue a CPP replacement rule as part of a “repeal and replace” operation, it would almost certainly focus on a substitution of conventional inside-the-fence-line measures related to the power plant subject to NSPS regulation to control CO<sub>2</sub> from existing power plants. Such future inside-the-fence measures would likely focus on carbon reductions from the actual coal-fired boilers that turn their electricity generators. This could include upgrading the efficiency of existing coal-plant boilers to reduce CO<sub>2</sub> and other pollutants emitted per unit of power produced. Previous Obama Administration EPA analyses found that such upgrades to the efficiency would lead to a roughly four

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165. EPA, FACT SHEET: PROPOSAL TO REPEAL THE CLEAN POWER PLAN, [https://www.epa.gov/sites/production/files/2017-10/documents/fs-proposed-repeal-cpp-final\\_oct10.pdf](https://www.epa.gov/sites/production/files/2017-10/documents/fs-proposed-repeal-cpp-final_oct10.pdf).

166. See *infra* Section IV.C.

167. EPA, EPA TAKES ANOTHER STEP TO ADVANCE PRESIDENT TRUMP’S AMERICA FIRST STRATEGY, PROPOSES REPEAL OF CLEAN POWER PLAN, 2 (Oct. 10, 2017) <https://www.epa.gov/newsreleases/epa-takes-another-step-advance-president-trumps-america-first-strategy-proposes-repeal>.

168. See *id.*

169. See EPA, ENDANGERMENT AND CAUSE OR CONTRIBUTE FINDINGS FOR GREENHOUSE GASES UNDER THE SECTION 202(A) OF THE CLEAN AIR ACT, <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>.

percent increase in efficiency at coal plants.<sup>170</sup> This is in contrast to the Obama Administration CPP, which encouraged states to undertake measures outside the power plant fence line that did not affect existing regulated power plants inside-the-fence.

Estimation of costs and benefits is discretionary in setting dollar values and is widely varying and controversial depending on the agency's assumptions and estimations. Of note, cost considerations still are front and center in the evolving legal battle. Various provisions of the Clean Air Act require EPA to weigh both costs and benefits of regulations. For example, Section 111 directs EPA to establish performance standards for sources of air pollution that reflect the "best system" of pollution reduction, "taking into account the cost" of achieving the standard.<sup>171</sup> The CPP would have had its costs exceeding direct benefits if the Obama Administration EPA had not counted in its assessment of costs and benefits.<sup>172</sup>

- "Co-benefits" which the CPP did not expressly or directly regulate<sup>173</sup>
- The large amount of assumed international benefits over which the Clean Air Act has no extraterritorial jurisdiction
- Assumed and counted energy efficiency benefits after the Obama Administration final CPP rule explicitly dropped them from the proposed CPP rule as one of four allowed "building blocks" for state compliance with the CPP GHG reductions

Looking at each of these three issues regarding what benefits are properly counted in executive rulemaking, the Obama Administration EPA justified a positive economic balance of the Clean Power Plan based on counting what have now become challenged benefits. These included the immediate respiratory health improvements from the "co-benefits" of reduction of criteria pollutant lung irritants along with unrelated energy efficiency assumptions, and counting international extraterritorial economic benefits of mitigating climate change.<sup>174</sup> The

170. Lisa Friedman & Brad Plumer, *EPA Announces Repeal of Major Obama-Era Carbon Emissions Rule*, N.Y. TIMES, Oct. 9, 2017.

171. 42 U.S.C. § 7411.

172. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, Final Rule, 80 Fed. Reg. 64,661 (Oct. 23, 2015). *See also* Congressional Research Service, *EPA Regulations: Too Much, Too Little, or On Track?*, CRS Report R41561 Dec., 30, 2016, at 13.

173. *See supra* Section III.D.

174. *See* Alejandro Davila Fragoso, *Harvard Study Finds \$38 Billion Economic Benefit from EPA's Carbon Rule*, THINK PROGRESS, at 4 (June 9, 2016) <https://thinkprogress.org/harvard-study-finds-38-billion-economic-benefit-from-epas-carbon-rule-5448fc324979/>. "Research has repeatedly shown that improved air quality is associated with health benefits such as fewer premature deaths, heart attacks, and

Obama Administration CPP cost-benefit analysis treated the cost savings arising from promoting energy efficiency, later expressly dropped by the Obama Administration from the rule’s final promulgation, as a reduction of the economic costs of the rule.<sup>175</sup> This action offsets the increased cost associated with more use of renewable energy encouraged by the Plan.<sup>176</sup> The “benefit” side of cost-benefit analysis places an estimated dollar value on non-marketable “public” benefits, including human life, health, and well-being, aesthetics, recreation, and ecosystem integrity.<sup>177</sup>

The Obama Administration EPA had previously estimated substantial benefits resulting from the CPP, including fourteen to thirty-four billion dollars in benefits accruing just to health, monetizing the benefits each year of an estimated 3,600 premature deaths, 1,700 heart attacks, 90,000 asthma attacks, and of 300,000 lost work and school days.<sup>178</sup> EPA estimated the CPP costs at 5.1-8.4 billion dollars per year.<sup>179</sup> The benefits (counting all “co-benefits” and international as well as domestic benefits from carbon and other controversial and contested “co-benefit” pollutant reduction) were estimated at thirty-two to fifty-four billion dollars per year.<sup>180</sup>

The change in administrations altered cost-benefit calculations. According to the Trump Administration EPA, the repeal of the CPP is estimated to save thirty-three billion dollars in avoided compliance costs in 2030.<sup>181</sup> To justify repealing the Clean Power Plan, the Trump Administration EPA changed the method of assessing costs and benefits.

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hospitalizations from respiratory and cardiovascular illnesses.” *Id.* According to this study, approximately 3,500 lives could be saved annually with a power plan carbon standard. *Id.*

175. See Elisabeth Gilmore, *On Balance: Teachable Moments in Benefit-Cost Analysis: From Obama to Trump*, SOCIETY OF BENEFIT-COST ANALYSIS (Mar. 7, 2018), <https://benefitcostanalysis.org/balance-teachable-moments-benefit-cost-analysis-obama-trump>.

176. *Id.*

177. *Id.*

178. Nathan Hultman, *Trump’s Executive Order on Energy Independence*, BROOKINGS INST., Mar. 28, 2017, at 2-3; see AMERICAN LUNG ASS’N, AMERICAN LUNG ASSOCIATION PLEDGES TO FIGHT TRUMP ADMINISTRATION ASSAULT ON CLEAN AIR AND CLIMATE CHANGE (Mar. 27, 2017), <https://www.lung.org/about-us/media/press-releases/american-lung-association-pledges-to-fight-trump-assault-on-clean-air.html>; see also *supra* notes 74, 76.

179. See *supra* note 172. See also, CRS December 2016, *supra* note 172, at 13.

180. See *supra* note 172. See also, CRS December 2016, *supra* note 172, at 13. Other reporters reported EPA’s calculated benefits as fourteen to thirty-four billion dollars per year; Hultman, *supra* note 178. In essence, the EPA set the BSER as different for each state. BSER is set considering cost. The cost and possibilities for each state would be different depending on its electric generating technology mix, and estimated time until retirement of each. Traditionally, the BSER was set as the same for each emitting technology or source.

181. See Gilmore, *supra* note 175.

In 2017, EPA no longer counted:

- Climate change mitigation benefits occurring outside the United States over which EPA has no legal jurisdiction and which the CPP does not address
- Indirect “co-benefits” that the Plan does not address
- Estimates of avoided generation costs of the Clean Power Plan<sup>182</sup>

### *C. The Legal Dimensions of International ‘Benefit’*

One needs to address the significance of international borders, when U.S. law does not extend beyond its borders, but when the benefits of reduced carbon emissions on warming are international. When all costs are domestic, and benefits are international, what is the most appropriate comparison of costs and benefits? First, as to the territorial issue, these changed assumptions and calculations in 2017 reduce the assumed CPP climate-change benefits from the Obama EPA prior 20 billion dollars estimate of international benefits, to 3 billion dollars of benefits only measured within the U.S.<sup>183</sup> Thus, eighty-five percent of the CPP Clean Air Act benefits were counted outside U.S. territory in which the Clean Air Act exercises jurisdiction. These eighty-five percent international versus fifteen percent national benefit values are very controversial regarding what is the proper methodology for the U.S. CPP calculation.

Environmentalists have argued that international benefits should be counted in regulatory evaluation.<sup>184</sup> They note that carbon reduction benefits everyone globally, which otherwise would be plagued by greater warming.<sup>185</sup> Some claim that these benefits should be recognized and counted if they are realized.<sup>186</sup> According to then-current EPA Administrator Scott Pruitt, the proposed repeal is being conducted in a

182. See Ted Gayer, *The Social Costs of Carbon*, BROOKINGS INST. (Feb. 28, 2017) <https://www.brookings.edu/testimonies/the-social-costs-of-carbon/>. Instead of considering global climate benefits, the Trump administration EPA now only shows domestic benefits.

183. Lorraine Chow, *Trump EPA ‘Cooks the Books’ to Hide Benefits of Clean Power Plan*, ECOWATCH, Oct. 11, 2017, <https://www.ecowatch.com/epa-clean-power-plan-2495501894.html>; see EPA, FACT SHEET: CLEAN POWER PLAN BENEFITS OF A CLEANER, MORE EFFICIENT POWER SECTOR, [https://19january2017snapshot.epa.gov/cleanpowerplan/fact-sheet-clean-power-plan-benefits-cleaner-more-efficient-power-sector\\_.html](https://19january2017snapshot.epa.gov/cleanpowerplan/fact-sheet-clean-power-plan-benefits-cleaner-more-efficient-power-sector_.html).

184. Emily Holden, *EPA’s Climate Rule Withdrawal Will Include Big Changes to Cost Calculations*, POLITICO, Oct. 5, 2017, <https://www.politico.com/story/2017/10/05/epa-climate-rule-withdrawal-cost-calculations-243520>.

185. *Id.*

186. *Id.*

‘transparent way,’ with the agency producing an Advanced Notice of Proposed Rulemaking (ANPRM).<sup>187</sup>

Testimony provided by a witness from the Brookings Institution traced the history of cost and benefit assessment during the recent past, noting that before the Obama Administration’s Executive Orders, the practice for the past two decades, as well as the congressionally stated purpose of the Clean Air Act, was not to consider global benefits and to focus on domestic benefits exclusively:

I believe that the exclusive focus on a global measure runs counter to standard benefit–cost practice, in which only the benefits within the political jurisdiction bearing the cost of the policy are considered. It also seems at odds with the expressed intent of long-standing executive orders and of authorizing statutes. For example, the main regulatory guidance document that has been in place for over 20 years is Executive Order 12866, which makes clear that the appropriate reference point for analyzing federal regulatory policies is the U.S. citizenry, not the world. And a subsequent guidance document by the Office of Management and Budget (known as Circular A-4) maintained an emphasis on domestic benefits. Similarly, when enacting the Clean Air Act, Congress stated that its purpose was to “protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and productive capacity of its population,” which again suggests a focus on domestic benefits. Similar language is found in other authorizing statutes for environmental regulations.<sup>188</sup>

The Clean Air Act Section 111 was used as the legal predicate for the CPP.<sup>189</sup> EPA initially estimated that the CPP would yield about 30 billion dollars in global climate benefits by 2030.<sup>190</sup> Of note, this thirty billion dollar estimate included only approximately two to seven billion dollars in domestic benefits, which was less than the estimated domestic costs of 5.1-8.4 billion dollars per year.<sup>191</sup> According to an analysis and witness from the Brookings Institute:

The difference between global and domestic benefits of greenhouse gas regulations is significant, as the global measure is 4 to 14 times greater than the estimated domestic measure. For example, for its proposed regulations for existing power plants, the EPA estimated climate benefits amounting to \$30 billion in 2030. However, the

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187. See *id.*; See EPA, EPA ADMINISTRATOR PRUITT PROPOSES COST-BENEFIT ANALYSIS REFORM (June 7, 2018), <https://www.epa.gov/newsreleases/epa-administrator-pruitt-proposes-cost-benefit-analysis-reform>.

188. Gayer, *supra* note 182, at 2.

189. See *supra* notes 36, 48, 60.

190. Gayer, *supra* note 182, at 2.

191. *Id.*

estimated domestic climate benefits only amount to \$2-\$7 billion, which is less than EPA's estimated compliance costs for the rule of \$7.3 billion. The use of a global social cost of carbon to estimate benefits means that agencies will adopt regulations that could cost Americans more than they receive in climate-related benefits. This approach could be especially problematic if U.S. actions simply shift emissions overseas.<sup>192</sup>

The net cost-effectiveness of the CPP depends on whether one counts monetized benefits estimated to occur outside the United States and beyond the reach of U.S. law. Domestic versus international benefits change the net benefits by a factor of approximately 1000 percent.<sup>193</sup> This single modeling choice swings a program that is cost-justified globally to one which is not cost-justified domestically.<sup>194</sup> For comparison of international benefits to the geographic location of costs, all costs of CPP are imposed domestically on U.S. power plants only.

Some have noted that because the CPP does not address international CO<sub>2</sub>, the United States has no jurisdiction over what other nations do or do not do, and because the United States does not pay for what other nations do, international benefits have no place in a calculation involving U.S. carbon: "It's reasonable to count only the rule's U.S. benefits since Americans would be paying the costs, said Jeff Holmstead, an industry lawyer who was EPA's air administrator under former President George W. Bush."<sup>195</sup> The Trump EPA reverted to White House guidance from 2003, which directed regulators performing cost-benefit analyses to "focus on benefits and costs that accrue to citizens and residents of the United States."<sup>196</sup> This prior 2003 guidance stated that international implications should go into a separate report.<sup>197</sup>

There also is a now developing novel international dimension. The Obama Administration CPP cost-benefit analysis assumed that there will be dramatically more solar photovoltaic (PV) panels used to offset electric generation from existing coal-fired power, a large number of which are either made in or compose key elements of the silicon and other materials produced in China.<sup>198</sup> China has significantly subpar

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192. *Id.*

193. *Id.* (citing a four to fourteen times multiplier, or 400-1400 percent increase in estimated benefits when counting global benefits instead of domestic benefits).

194. See EPA, *supra* note 187 (U.S. benefits of two to seven billion dollars are less than EPA's estimated compliance costs for the rule of 7.3 billion dollars).

195. Holden, *supra* note 184, at 4.

196. *Id.* at 5.

197. *Id.*

198. Katie Fehrenbacher, *China is Utterly and Totally Dominating Solar Panels*, FORTUNE MAG., June 18, 2015, <http://fortune.com/2015/06/18/china-is-utterly-and-totally-dominating-solar-panels/>.

environmental regulations compared to other major economies of the world.<sup>199</sup> None of the environmental repercussions of more made-in-China photovoltaic panels manufacturing are calculated as environmental costs in the original CPP cost analysis, because those environmental impacts of Chinese or other developing country manufacture occur outside of the United States.

In fact, the makers of these Chinese PV panels were recently found by the International Trade Commission to have violated international trade laws.<sup>200</sup> That panel has recommended the possibility that stiff import tariffs be imposed on these Chinese photovoltaic panels as a sanction for unfair trade practices.<sup>201</sup> International environmental costs abroad of manufacture of alternative sources of power generation, which are thereafter exported to the United States, are not included in the cost calculation, although they were originally one of the building blocks of compliance and CPP benefits.<sup>202</sup> Although it now looms as a question on the exercise of executive branch power on cost and benefit considerations, there is no court precedent on this question of first legal impression.

#### *D. Are ‘Co-Benefits’ a Legitimate Operand?*

Beyond international geography, there is a second issue of whether it is proper math to count “co-benefits” from pollutant reduction not regulated by the CPP as benefits of the CPP. Even though the CPP is targeted at global warming and climate change goals, less than one-tenth of one percent of the estimated benefits of the CPP are from carbon reduction and warming mitigation; more than ninety-nine percent of the benefits are “co-benefits” from estimated reduction of criteria pollutants

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199. Jonathan Kaiman, *China Strengthens Environmental Laws*, THE GUARDIAN (Apr. 25, 2014) <https://www.theguardian.com/environment/2014/apr/25/china-strengthens-environmental-laws-polluting-factories>. Even if China creates more environmental regulations, the problem lies in the implementation of these laws. *Id.* China is the largest carbon emitter in the world.

200. Kirsten Korosec, *Why Rooftop Solar Might Get A Lot More Expensive in the U.S.*, FORTUNE MAG., Sept. 22, 2017, <http://fortune.com/2017/09/22/solar-costs-tariffs/>. The International Trade Commission in September 2017 that imports of low-cost solar panels from China have hurt U.S. manufacturers. The decision gives the Trump Administration the power to issue steep tariffs on Chinese companies—where the majority are made—cutting off the flow of cheap panels to installers in the U.S.

201. *Id.* The claimant, Suniva, requested that solar cells brought into the United States have a forty-cent tariff, raising the minimum price to seventy-eight cents/watt, which is two-thirds more expensive than the cheapest panels on the market.

202. See ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), ENERGY: THE NEXT FIFTY YEARS, <https://www.oecd.org/futures/17738498.pdf>.



which are not regulated by the CPP.<sup>203</sup> Criteria pollutant impact is not global, but rather a function of geographic proximity of human receptors to the power plant sources emitting these criteria pollutants.<sup>204</sup>

The degree of impact on benefits makes the prior international/national domestic calculus of benefits pale in comparison: Adding “co-benefits” to the CPP calculation boosts benefits by more than 10,000 percent.<sup>205</sup> Here again, there is a dispute as to whether their inclusion is appropriate. According to the Congressional Research Service:

There are recurring questions regarding the methodologies used to estimate both costs and benefits, including what to choose as the baseline against which to measure changes resulting from a regulation; how to monetize improvements in public health, such as the avoidance of premature death; whether to count both direct benefits and co-benefits (i.e., benefits achieved that were not the purpose of the regulation); how to account for benefits for which there is no accepted measurement or valuation methodology; whether to include reductions in the “social cost of carbon” as a benefit and, if so, how to measure those benefits; and whether certain benefits or costs are double-counted when simultaneous proposals address the same pollutant.<sup>206</sup>

Legislation has been introduced by Evan Jenkins, a Republican Representative from West Virginia, to prohibit EPA and the Department of Energy from including the social cost of controlling carbon and methane, greenhouse gases, or ancillary co-benefits of particulate matter reduction.<sup>207</sup> Some states did not agree with the ability or discretion of EPA to count “co-benefits.” For example, the Director of the Ohio EPA, in comments to U.S. EPA, stated:

When U.S. EPA promulgates a revised National Ambient Air Quality Standard (NAAQS) it uses the amount of air quality improvement as a measure to determine benefits. If a facility installs controls to meet the NAAQS and also complies with the Utility MATS, plus Cross-State Air Pollution Rule (CSAPR), U.S. EPA

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203. See CRS, *supra* note 172. The direct CPP direct benefits of mercury reductions were four to six million dollars, which increased one-thousand-fold when indirect co-benefits were added to make total benefits of CPP equal to thirty-seven to ninety billion dollars. *Id.*

204. EPA, EPA CLEAN POWER PLAN, Section IX: Community and Environmental Justice Considerations, 6 (Aug. 3, 2015), <http://www.ceed.org/wp-content/uploads/2015/12/PPP-Section-IX-Community-and-Environmental-Justice-Considerations.pdf>.

205. “Co-benefits” increase from single digit million benefits to double-digit billion benefits. See *supra* note 203.

206. TOO MUCH, TOO LITTLE, OR ON TRACK?, *supra* note 59, at 4 n.16.

207. Transparency and Honesty in Energy Regulations Act of 2017, H.R. 3117, 115<sup>th</sup> Cong. (2017).

should not double or even triple count those reductions as part of each rulemaking. The health benefit that U.S. EPA states is occurring can only occur once, not be recounted multiple times under separate U.S. EPA rulemakings.<sup>208</sup>

A search for EPA court decisions regarding counting of indirect co-benefits or double-counting of benefits produces no precedent. It remains an issue of first impression. There is a purpose in counting “co-benefits.” The Obama Administration CPP expressly stated that it sought and intended to achieve its counted “co-benefits” by making it too expensive or difficult through CPP regulations for existing coal-fired power plants to continue operation, thereby expressly taking credit for other criteria pollutant reduction of “co-benefits” that operating coal-fired power plants otherwise emit if they continue operating.<sup>209</sup> The Obama Administration EPA added estimated indirect incidental “co-benefits” related to reduction of criteria pollutants which were not regulated by the CPP rule.<sup>210</sup> This altered the otherwise lopsided outcome of CPP private sector implementation costs far exceeding direct benefits of its regulated CO<sub>2</sub> reduction.<sup>211</sup> This fundamentally alters the outcome of the cost/benefit analysis of the CPP.

The CPP regulation does not regulate or even mention any of these criteria pollutants whose claimed estimated reduction produces “co-benefits,” even though it does state its motive to constrain operation of existing and future coal-fired power plants.<sup>212</sup> These other criteria pollutants and hazardous air pollutants yielding “co-benefits” are already

208. TOO MUCH, TOO LITTLE, OR ON TRACK?, *supra* note 59; *see also* UTIL. AIR REGULATORY GRP. (UARG), COMMENTS IN RESPONSE TO EPA’S SUPPLEMENTAL FINDING (Jan. 15, 2016) <https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OAR-2009-0234-20557&attachmentNumber=1&disposition=attachment&contentType=pdf>. “In order for there to be co-benefits from PM<sub>2.5</sub> to attribute to the Proposed Rule, the Proposed Rule must require more reductions of primary PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors (e.g., SO<sub>2</sub> and NO<sub>x</sub>) than would otherwise occur under other existing regulations, including the current National Ambient Air Quality Standards (NAAQS) for PM<sub>2.5</sub>. To include any co-benefits from reductions that will occur anyway as a result of the current PM<sub>2.5</sub> NAAQS in this rule would be to double-count those benefits—first as the direct benefits that were counted to justify the PM<sub>2.5</sub> NAAQS in that rule’s 2006 RIA (EPA, 2006), and then again as co-benefits to justify this Proposed Rule.”

209. *See supra* notes 56-58.

210. *See supra* notes 205, 207, 211.

211. *See* EPA, *supra* note 187 (U.S. benefits of two to seven billion dollars are less than EPA’s estimated compliance costs for the rule of 7.3 billion dollars).

212. *Id.*; *See also* BRIAN F. MANNIX, GEORGE WASHINGTON UNIV. REGULATORY STUDIES CTR., PUBLIC INTEREST COMMENT ON EMISSION GUIDELINES FOR GREENHOUSE GAS EMISSIONS FROM EXISTING ELECTRIC UTILITY GENERATING UNITS; REVISIONS TO EMISSION GUIDELINE IMPLEMENTING REGULATIONS; REVISIONS TO NEW SOURCE REVIEW PROGRAM (Oct. 30, 2018), <https://regulatorystudies.columbian.gwu.edu/sites/g/files/zaxdzs1866/f/downloads/EPA-ACE-PIC-Mannix-10-30.pdf>.

regulated to statutorily-required levels of “adequate” or “ample” margins of public health safety, respectively.<sup>213</sup> We do not have any Supreme Court determination about the legal permissibility of a ‘new math’ algorithm counting “co-benefits” as a means for justification of specific regulations pursuant to administration law, although the Court reached the “cost” issue in 2015 for the first time on another matter.<sup>214</sup>

This changed with the change of administrations: The Trump administration in 2017 no longer considered the indirect CPP ‘co-benefits’ related to chemicals not expressly regulated by the CPP as monetized benefits to be counted regarding the CPP. Trump’s EPA will not count those ancillary reductions as ‘co-benefits’ where those criteria pollutants<sup>215</sup> are already regulated by the EPA under other standards in the Clean Air Act.<sup>216</sup> And most areas of the country are in compliance with the NAAQS required levels for criteria pollutants.<sup>217</sup>

The Trump Administration counts zero benefits of reducing U.S. “co-benefits” below the national NAAQS standards for the six criteria pollutants.<sup>218</sup> Critics charge that the scientific community thinks there would be additional health benefits from reductions beyond those required by the Clean Air Act.<sup>219</sup> However, the Clean Air Act requires that these NAAQS levels have already been set at levels to “adequately protect” human health<sup>220</sup> in each of the 264 Air Quality Control Districts (“AQCD”) in the United States.<sup>221</sup> There has long been a difference between what scientists and/or EPA’s Clean Air Scientific Advisory Committee (“CASAC”) state is the best or most protective recommended NAAQS level, and what EPA, in its judgment,

213. See FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS, *supra* note 77, at figure 5.10.

214. See *infra* Section IV.C.

215. These include particulate matter, nitrogen oxides, sulfur dioxide, etc. See FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS, *supra* note 77, at 189, tbl. 5.1.

216. See Chris Mooney, *Even Trump’s EPA says Obama’s Climate Plan Would Save Thousands of Lives Each Year*, WASHINGTON POST (Nov. 1, 2017) [https://www.washingtonpost.com/news/energy-environment/wp/2017/11/01/trumps-epa-says-obamas-climate-rule-could-prevent-up-to-4500-deaths-annually-moves-to-scrap-it/?utm\\_term=.0077dfc3c4b0](https://www.washingtonpost.com/news/energy-environment/wp/2017/11/01/trumps-epa-says-obamas-climate-rule-could-prevent-up-to-4500-deaths-annually-moves-to-scrap-it/?utm_term=.0077dfc3c4b0).

217. See EPA, AQCR NAAQS COMPLIANCE.

218. Environmentalists Blast EPA’s Cost-Benefit Review in CPP Repeal Effort, INSIDE EPA WEEKLY REPORT, Oct. 20, 2017. See also Kimberly Castle and Richard L. Levesz, *Environmental Standards, Thresholds, and the Next Battleground of Climate Change Regulations*, 103 MINN. L. REV. 2019.

219. *Id.*

220. FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS, *supra* note 77, at 186-89.

221. *Id.* at 193.

establishes.<sup>222</sup> The Trump Administration EPA issued a directive that no member of EPA advisory committees shall “be currently in receipt of EPA grants” or be “in a position that otherwise would reap substantial direct benefit from an EPA grant.”<sup>223</sup>

While EPA exercises the ultimate legal authority over what it does in setting Clean Air Act standards, when the EPA’s decision differs from the EPA’s Clean Air Scientific Advisory Committee’s recommendation on an emission limit, EPA must provide an explanation.<sup>224</sup> One circuit court found that the CASAC’s prior recommendation to have the standard “lowered from 0.080 ppm to no greater than 0.070 ppm” due to “overwhelming scientific evidence” was not a sufficiently clear statement to bind EPA.<sup>225</sup> However, the CASAC must be clear in linking emission levels to definitive impacts on public health; the Supreme Court will not overrule EPA decisions without a clear scientific determination by the CASAC:

Had CASAC reached a scientific conclusion that adverse health effects were likely to occur at the 0.070 ppm level, EPA’s failure to justify its uncertainty regarding the existence of adverse health effects at this level would be unacceptable . . . , [b]ut we were unable to determine whether CASAC reached any such scientific conclusion.<sup>226</sup>

The court of appeals noted the great deference due an administrative agency in charge of implementing a standard, and “stressed that the agency had broad leeway in deciding how much of a scientific margin of safety was sufficient.”<sup>227</sup>

222. As one recent example, the EPA Clean Air Science Advisory Committee in 2014 recommended that it was necessary to lower the ozone NAAQS to sixty ppb or below, from its then-current standard of seventy-five ppb, to protect public health and reduce premature deaths. The Obama Administration EPA in 2015 elected to not follow this advice, and lowered the standard to seventy ppb. See Patrick Ambrosio, *Ozone Standard of 60-70 parts per billion Appropriate to Protect Health EPA Staff Says*, 45 ENV’T REP. 2519 (BNA), Sept. 5, 2014; see EPA, 2015 REVISION TO 2008 OZONE NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) RELATED DOCUMENTS, <https://www.epa.gov/ozone-pollution/2015-revision-2008-ozone-national-ambient-air-quality-standards-naaqs-related>.

223. See E. Scott Pruitt, Strengthening and Improving Membership on EPA Advisory Committees (Oct. 31, 2017) <https://perma.cc/VZM2-VBKQ>.

224. See *Am. Farm Bureau v. EPA*, 559 F.3d 512, 528 (D.C. Cir. 2009) (EPA failed in the final rule to adequately explain its reason for not accepting the CASAC’s recommendation); see 42 U.S.C. § 7607(d)(3) (2012).

225. See *Miss. v. EPA*, 744 F.3d 1334, 1356 (D.C. Cir. 2013).

226. *Id.* at 1357.

227. Steven Ferrey, *Courts Cap the ‘Trade’: Regulation of Competitive Markets When Courts Overturn State and Federal Cap-And-Trade Regulation*, 117 W. VA. L. REV. 681, 730 (2014); see *Miss. v. EPA*, 723 F.3d 246, 254, 265 (D.C. Cir. 2013) *amended and superseded by rehearing*, 744 F.3d 1334 (D.C. Cir. 2013).

One can compare CPP cost-benefit values to all other regulations. A draft 2016 OMB report to Congress estimates that the annual benefits from all major regulations over the last ten years were between 208 billion and 627 billion dollars, while their costs were between 57 billion and 85 billion dollars.<sup>228</sup> OMB's 2005 report to Congress, a decade earlier, estimated that major rules from the previous ten years provided benefits of 69.6 billion to 276.8 billion dollars, while costing between 34.8 billion and 39.4 billion dollars.<sup>229</sup> The CPP cost-benefit is a closer call, based on the inputs and assumptions that one makes with regard to counting 'co-benefits' and international benefits.

As this article went to press, the matter of "co-benefits" in all EPA rulemakings became a major issue: In 2018 EPA released an Advance Notice of Proposed Rulemaking to re-examine all cost and benefit analysis by the agency.<sup>230</sup> The notice references the *Michigan*<sup>231</sup> and *Entergy v. Riverkeeper*<sup>232</sup> Supreme Court decisions as mandating, or allowing, respectively, consideration of costs by the agency.<sup>233</sup> EPA notes that a comment(s) submitted to the Agency "has justified the stringency of a standard based on the estimated benefits from reductions in pollutants not directly regulated by the action (i.e., "ancillary benefits" or "co-benefits")."<sup>234</sup> This potential new executive agency rulemaking on this transcendent issue moves the dispute in dimensions.

228. See OMB, 2016 DRAFT REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND AGENCY COMPLIANCE WITH THE UNFUNDED MANDATES REFORM ACT, [https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/legislative\\_reports/draft\\_2016\\_cost\\_benefit\\_report\\_12\\_14\\_2016\\_2.pdf](https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/legislative_reports/draft_2016_cost_benefit_report_12_14_2016_2.pdf).

229. See OMB, VALIDATING REGULATORY ANALYSIS: 2005 REPORT TO CONGRESS ON THE COSTS AND BENEFITS OF FEDERAL REGULATIONS AND UNFUNDED MANDATES ON STATE, LOCAL, AND TRIBAL ENTITIES I, [https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/omb/inforeg/2005\\_cb/final\\_2005\\_cb\\_report.pdf](https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/omb/inforeg/2005_cb/final_2005_cb_report.pdf).

230. Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process (ANPR, 40 CFR Ch.I) at 6, [https://www.epa.gov/sites/production/files/2018-06/documents/cost\\_and\\_benefit\\_consideration\\_anprm\\_pre-pub.pdf?utm\\_source=Federal+State+Policy+Updates+June+2018&utm\\_campaign=State+and+Federal+Updates&utm\\_medium=email](https://www.epa.gov/sites/production/files/2018-06/documents/cost_and_benefit_consideration_anprm_pre-pub.pdf?utm_source=Federal+State+Policy+Updates+June+2018&utm_campaign=State+and+Federal+Updates&utm_medium=email).

231. See *Mich. v. EPA*, 135 S. Ct. 2699 (2015).

232. See *Entergy Corp. v. Riverkeeper*, 556 U.S. 208 (2009).

233. *Id.*

234. See Maxine Joselow, *Clean Air Advocates Worried by EPA's Move to Rethink Cost-Benefit Calculations*, SCI. MAG. <http://www.sciencemag.org/news/2018/06/clean-air-advocates-worried-epa-s-move-rethink-cost-benefit-calculations>.

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#### IV. LEGAL DISPUTE CHANGING CONSTITUTIONAL AND ADMINISTRATIVE LAW

##### A. “*Staying*” *Current Lex*

The CPP is in suspended legal animation amid these issues swirling about it. As soon as the regulation was final, legal challenges to the Clean Power Plan were filed by more than 100 parties following its promulgation in October 2015.<sup>235</sup> Those twenty-seven states challenging the EPA CPP rule and the eighteen states supporting it are illustrated in Figure 2.<sup>236</sup> The ongoing and pending legal challenge to the CPP is not yet through the appellate process nor heard by the Supreme Court, however, petitioners sought a stay from the D.C. Circuit, which denied the request.<sup>237</sup> The D.C. Circuit denied the stay in 2015 because they noted that there are extraordinary standards on the issuance of extraordinary writs.<sup>238</sup>

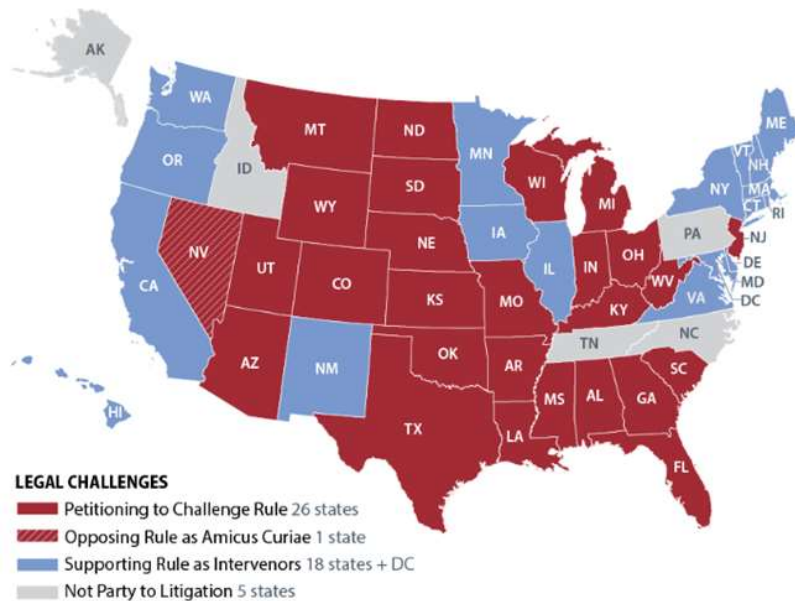
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235. *See id.*; *See also* TOO MUCH, TOO LITTLE, OR ON TRACK?, *supra* note 59, at 13.

236. CONG. RESEARCH SERVICE, CLEAN POWER PLAN: LEGAL BACKGROUND AND PENDING LITIGATION IN WEST VIRGINIA V. EPA, R44480 (Mar. 8, 2017) at 13, fig. 1, <https://fas.org/sgp/crs/misc/R44480.pdf>.

237. *See* Gavin Bade, *DC Circuit Court Denies Stay on EPA Clean Power Plan*, UTILITY DIVE (Jan. 21, 2016). The three judge panel stated that the parties had not satisfied the “stringent requirements” necessary for a stay. *Id.*

238. *W. Va. v. EPA*, Case No. 15-1277 (Sept. 9, 2015) (citing *Reynolds Metals Co. v. FERC*, 777 F.2d 760, 762-63 (D.C. Cir. 1985); *Washington Metro. Area Transit Comm’n v. Holiday Tours, Inc.*, 559 F.2d 841, 843 (D.C. Cir. 1977)).

Consolidated Petitions: *West Virginia et al. v. EPA et al.*, D.C. Circuit No. 15-1363Source: Prepared by CRS from litigation filings in *West Virginia v. EPA*.

Notes: The Clean Power Plan, as finalized, did not set emissions goals for Alaska, Hawaii, Vermont, or the District of Columbia (the latter two because there are no affected electric generating units in those locations).

Figure 2

The Supreme Court thereafter granted a stay on February 9, 2016,<sup>239</sup> in less than three weeks after it was applied for.<sup>240</sup> The Supreme Court's dissent on the stay was joined by Justices Ginsburg, Breyer, Sotomayor, and Kagan,<sup>241</sup> not wanting to stay the CPP during the Obama Administration. The Court's order granting the stay applied directly to EPA's CPP rule, rather than to a lower court judicial decision on appeal as it usually does when a lower court decision is on appeal.<sup>242</sup> No party in the matter was able to point to any previous case in which the Supreme Court had stayed an agency rule before any court had reviewed it on its

239. *W. Va. v. EPA*, 136 S. Ct. 1000 (2016); see Jonathan Adler, *Supreme Court Put the Brakes on the EPA's Clean Power Plan*, WASHINGTON POST (Feb. 9, 2016), [https://www.washingtonpost.com/news/voikh-conspiracy/wp/2016/02/09/supreme-court-puts-the-brakes-on-the-epas-clean-power-plan/?utm\\_term=.dd512a870f71](https://www.washingtonpost.com/news/voikh-conspiracy/wp/2016/02/09/supreme-court-puts-the-brakes-on-the-epas-clean-power-plan/?utm_term=.dd512a870f71).

240. The first application for a stay was filed on January 21, 2016; the Court granted the stay on February 9, 2016. This stay before a court of appeals decision on the merits was deemed by the Congressional Research Service as "unusual." CONG. RESEARCH SERVICE, *supra* note 236, at 15.

241. *W. Va. v. EPA*, No. 15A773 (Feb. 9, 2016) (order staying the CPP).

242. *Id.*

merits.<sup>243</sup> After being reversed by the Supreme Court granting a stay, the D.C. Circuit found that the Supreme Court stay not only relieved EPA of its enforcement obligation, but also relieved EPA of its statutory duty to regulate carbon for the indefinite future.<sup>244</sup>

Some commentators posit that this was not a surprising outcome, given the ruling requiring EPA to consider costs before issuing Clean Air Act regulations, in *Michigan*.<sup>245</sup> Pending subsequent decisions, the Trump Administration EPA now seeks the D.C. Circuit to delay further action.<sup>246</sup> The Trump Administration argues that given its discretion to withdraw and repeal the CPP, a court decision on its merits would be moot.<sup>247</sup> Environmental groups have continued to press for a decision of the D.C. Circuit court that the CPP was, and is, legally promulgated with executive discretion without Congressional approval.<sup>248</sup>

Media attention has focused on numeric aspects of the Trump’s repeal two, enact one regulatory ratio.<sup>249</sup> Not as much noticed, but of much more legal significance and lasting importance, are what could become common law permanent changes to what courts will deem legal versus unpermitted executive action or regulation. Under the radar of

243. See Robert Percival, *In Blocking EPA Clean Power Plan, is the Supreme Court Wading Deeper Into Politics?*, THE CONVERSATION (Feb. 12, 2017), <http://theconversation.com/in-blocking-epa-clean-power-plan-is-the-supreme-court-wading-deeper-into-politics-54513>.

244. *W. Va., v. EPA*, No. 15-1363 (Aug. 8, 2017) (order determining the effect of the stay of the CPP).

245. See Adler, *supra* note 239. As a side note, there was no stay granted to the plaintiffs in the Supreme Court *Michigan* decision resulting in power plants paying for later-stricken upgrades to comply with EPA’s rulemaking during the litigation only to have it overturned by the Supreme Court for the lack of cost-of-compliance analysis done by EPA for the § 112 regulations. By the time the order was invalidated, the costs were expended and plants were at, or near compliance with the invalidated rulemaking, as suggested in Petitioners application for stay.

246. *Murray Energy Corp. v. EPA*, No. 16-1127 (D.C. Cir.), motion filed Apr. 18, 2017.

247. See Cogan Schneier, *EPA Moves to Kill Clean Power Plan as Lawsuit Languishes in DC Circuit*, NAT’L L.J. (Oct. 10, 2017). “Technically, [finalizing the rescission] should moot the challenges to the Clean Power Plan because, at that point, it wouldn’t exist anymore,” said Crowell & Moring partner Thomas Lorenzen, who argued on behalf of the National Rural Electric Cooperative Association and other involved industry groups.”

248. ENVIRONMENTAL DEFENSE FUND, LIST OF SUPPORTERS OF THE CLEAN POWER PLAN IN COURT, [https://www.edf.org/sites/default/files/content/list\\_of\\_supporters\\_of\\_the\\_clean\\_power\\_plan\\_in\\_court.pdf](https://www.edf.org/sites/default/files/content/list_of_supporters_of_the_clean_power_plan_in_court.pdf). Among this list, there are eighteen states listed in addition to Washington D.C. *Id.* There are also sixty municipalities, several power companies, high tech companies, leading consumer brands, advanced energy associations, business associations, and 208 members of Congress. *Id.*

249. See Clyde Wayne Crews Jr., *Donald Trump Promises To Eliminate Two Regulations For Every One Enacted*, FORBES (Nov. 22, 2016), <https://www.forbes.com/sites/waynecrews/2016/11/22/donald-trump-promises-to-eliminate-two-regulations-for-every-one-enacted/#5ad62b1f4586>.



most observers, President Trump in a single sentence directed all executive agencies to ensure that the “incremental cost” of all new regulations is no greater than zero.<sup>250</sup>

While this may seem ministerial and not as significant as many of the President’s other tweets, it could alter the future of executive action, EPA rulemaking, and *Chevron* deference to executive interpretation of their own authority and rulemaking. What makes this of high-level significance, is a decision of the Supreme Court a year before the Trump election.<sup>251</sup> This decision, for the first time in the history of U.S. Supreme Court jurisprudence, elevated the consideration of costs (and benefits) as a necessary prerequisite to justify EPA regulation.<sup>252</sup> Never before has the Court required such a quantitative evaluation as a prerequisite hurdle to rulemaking.<sup>253</sup> Thus, the last three decades of modern *Chevron* deference<sup>254</sup> to executive branch and EPA initiatives, is constrained and perhaps altered longer-term.

The Supreme Court largely upheld EPA’s authority to regulate greenhouse gases under the agency’s New Source Review (“NSR”) program.<sup>255</sup> There is a series of three recent decisions of the Supreme Court, culminating in *Michigan*, when coupled with the ongoing cost challenge on the Clean Power Plan, which may fundamentally change U.S. administrative and constitutional law. By injecting, for the first time as matters of first impression, cost considerations into rulemaking, we are witnessing a substantial change in the separation of powers and discretion in American law. The foundation of *Chevron*<sup>256</sup> deference is altered.

### B. Legal “Tailoring”

In 2010, the Obama Administrator implemented its GHG “Tailoring Rule,” which provided for a phasing in of Clean Air Act Title V and Prevention of Significant Deterioration/New Source Review (PSD/NSR) permitting requirements for CO<sub>2</sub>,<sup>257</sup> although taking the

250. See Cheri A. Budzynski, *The First Six Months of the Trump Administration: Will Trump Successfully Deregulate U.S. EPA?* LEXOLOGY (July 13, 2017), <https://www.lexology.com/library/detail.aspx?g=287657ec-82cd-4784-98cd-d9edc44a0783>.

251. *Mich. v. EPA*, 135 S. Ct. 2699, 2710 (2015).

252. *Id.*; See also *infra* Section IV.C.

253. See *infra* text accompanying notes 300-07.

254. *Chevron v. Nat’l Res. Def. Council*, 467 U.S. 837 (1984).

255. *UARG v. EPA*, 134 S. Ct. 2427, 2457-58 (2014).

256. *Chevron*, 467 U.S. 837.

257. JAMES E. MCCARTHY, CONG. RESEARCH SERVICE, EPA REGULATION OF GREENHOUSE GASES: CONGRESSIONAL RESPONSES AND OPTIONS (Feb. 5, 2015), 7-5700, R41212; The Clean Air Act does not specifically regulate CO<sub>2</sub> emissions. It was held in *Mass. v. EPA*, 549 U.S. 497, that the EPA could choose to regulate CO<sub>2</sub> emitted by vehicle engines,

unusual step that 99.65 percent of the otherwise regulated facilities under the Clean Air Act would not have to meet the CO<sub>2</sub> standard.<sup>258</sup> The “Tailoring Rule” defined which stationary sources would be required to obtain Clean Air Act permits for GHG emissions.<sup>259</sup> The Clean Air Act imposes on stationary sources of pollution preconstruction permits if they have the potential to emit more than 100 tons per year (tpy) of any air pollutant (for some cases, 250 tons per year). EPA declined to impose this statutory standard on CO<sub>2</sub> emissions.<sup>260</sup>

When the EPA applied these same standards to “any source” of greenhouse gas emissions at the 250 tpy Clean Air Act thresholds, several smaller sources, such as “large office and residential buildings, hotels, large retail establishments, and similar facilities” fell into the group whose emissions were regulated.<sup>261</sup> Applying the Clean Air Act PSD provision at their specified 250 tpy threshold set in the statute to the regulation of CO<sub>2</sub> emissions would increase the number of covered sources under just this one program from 280 emitting sources of CO<sub>2</sub> proposed by EPA to more than 80,000 sources.<sup>262</sup> The EPA’s legal justification was that this would lead to the “absurd result” of affecting as many as six million sources of GHG emissions.<sup>263</sup>

EPA chose only to regulate those sources whose GHG emissions exceeded 75,000 (for modification) or 100,000 tpy (for new construction).<sup>264</sup> However, the Clean Air Act Prevention of Significant Deterioration provisions, which provided the congressional authority to EPA, cover all “major sources” that potentially can emit 100 or 250 tons of the relevant criteria pollutant annually.<sup>265</sup> This disparity of

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if it determined that CO<sub>2</sub> was a general pollutant that endangered public health. EPA subsequently so ruled, despite Justice Scalia’s dissent noting that such an interpretation of what it could regulate in the air would cover “*everything* airborne, from Frisbees to flatulence.” Subsequently, the EPA chose to extend this regulation to CO<sub>2</sub> emitted by larger power plants, which are stationary, rather than mobile, sources of pollution.

258. Author’s calculation: EPA claimed that this “tailoring” would reduce the number of facilities regulated from more than 80,000 with the requirement set at 250 tpy, to 280 with the threshold raised to 75,000 tpy or 100,000 tpy, or a reduction of 99.65 percent; *see also id.*

259. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule (Final Rule) 75 Fed. Reg. 31,514 (June 3, 2010).

260. *See id.*

261. *See UARG*, 134 S. Ct. 2427.

262. *Coal. for Responsible Regulation v. EPA*, 684 F.3d 102 (D.C. Cir. 2012).

263. “The ‘absurd results’ doctrine, which authorizes agencies to apply statutory requirements differently than a literal reading would indicate, as necessary to . . . avoid absurd results. . . .” 75 Fed. Reg. 31,516, 31,536 (preamble) (June 3, 2010).

264. 75 Fed. Reg. 31,523.

265. *Id.* “Facilities seeking to qualify for a PSD permit must, *inter alia*, comply with emissions limitations that reflect the “best available control technology” (BACT) for “each pollutant subject to regulation under” the Act. Section 7475(a)(4). . . . The Act neither compels nor permits EPA to adopt an interpretation of the Act requiring a source to obtain a PSD or

quantitative value by a factor of 400:1, conflicted with the basic elements of the Clean Air Act PSD requirements for six criteria air pollutants.<sup>266</sup>

Challengers argued that GHG regulation was not intended to apply to Title V of the Act or its PSD requirements without the Congress or EPA rewriting the statutory provisions of the Clean Air Act.<sup>267</sup> A decision of the U.S. Supreme Court ending its 2014 term, upheld these EPA rules in part, although this unilateral agency “tailoring” of the quantitative value was not permissible when the Congress had set a standard:

When an agency claims to discover in a long-extant statute an unheralded power to regulate “a significant portion of the American economy,” *Brown & Williamson*, 529 U.S., at 159, we typically greet its announcement with a measure of skepticism.<sup>268</sup>

Where the so-called “tailoring rule” administratively increased the numeric regulatory threshold by 40,000 percent from 250 tpy to 100,000 tpy, the Supreme Court held:

EPA lacked authority to ‘tailor’ the Act’s unambiguous numerical thresholds of 100 or 250 tons per year to accommodate its greenhouse-gas-inclusive interpretation of the permitting triggers. Agencies must always “‘give effect to the unambiguously expressed intent of Congress.’” *Nat’l Ass’n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 665. The power to execute the laws does not include a power to revise clear statutory terms that turn out not to work in practice.<sup>269</sup>

The U.S. Supreme Court held that EPA cannot unilaterally exercise greater than delegated executive authority to rewrite or refashion, regardless of convenience or the impossibility of following congressional command, stated within the Clean Air Act: “EPA’s interpretation is also unreasonable because it would bring about an enormous and transformative expansion in EPA’s regulatory authority

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Title V permit on the sole basis of its potential greenhouse-gas emissions”.... “where the term “air pollutant” appears in the Act’s operative provisions, EPA has routinely given it a narrower, context-appropriate meaning.” *Massachusetts* did not invalidate those longstanding constructions.... Concerns that BACT, which has traditionally been about end-of-stack controls, is fundamentally unsuited to greenhouse-gas regulation, which is more about energy use, are not unfounded. *UARG v. EPA*, No. 12-1146, slip op. at 1-2, 11 (S. Ct. June 23, 2014).

266. *Id.*; See EPA, CRITERIA AIR POLLUTANTS, <https://www.epa.gov/criteria-air-pollutants>; see *supra* note 258 (EPA changed threshold from 250 tpy to 100,000 tpy, a 400:1 differential).

267. *UARG*, slip op. at 12.

268. *Id.*

269. *Id.* at 20-24.

without clear congressional authorization,” where a court should demand “clear congressional authorization.”<sup>270</sup>

The Court concluded that EPA’s interpretation of the Act could not change or invent quantitative values or change the statutory math, and invalidated EPA’s “Tailoring Rule” on the grounds that it purported to amend the statute:

We conclude that EPA’s rewriting of the statutory thresholds was impermissible and therefore could not validate the Agency’s interpretation of the triggering provisions. An agency has no power to “tailor” legislation to bureaucratic policy goals by rewriting unambiguous statutory terms. Agencies exercise discretion only in the interstices created by statutory silence or ambiguity; they must always “‘give effect to the unambiguously expressed intent of Congress.’”<sup>271</sup>

Courts since the *UARG* decision, have relied on *UARG* to prohibit the EPA and other executive branch agencies from exercising regulatory authority to change or expand on the plain language of congressional statutes.<sup>272</sup> This legal principle has implications for the ongoing CPP issue.<sup>273</sup> Costs are an issue, their determination is quantitative, and agencies can no longer “tailor” plain language in a statute.<sup>274</sup> The agency must figure out what can and cannot be counted, and do the math on

270. *Id.* (citing *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 160 (2000)).

271. *Id.* at 21. Justice Scalia wrote that the EPA lacked the authority to change threshold limits set by Congress, but it may still regulate greenhouse gas emissions provided they were already regulated for emitting “conventional pollutants.” *Nat’l Ass’n. of Home Builders v. Defs. of Wildlife*, 551 U.S. 644, 665 (2007) (quoting *Chevron*, 467 U.S., at 843). EPA reasonably interpreted the Act to require best available control technology (BACT) for greenhouse gases emitted by sources that were otherwise subject to PSD review because of their emission of conventional pollutants. Those “anyway” sources could only be required to comply with greenhouse-gas BACT if they emitted more than a *de minimis* amount of greenhouse gases. *See UARG*, 134 S. Ct. 2427.

272. In *Conservation Law Fund., Inc. v. Pruitt*, 881 F.3d 24, 31 (1st Cir. 2018), the court emphasized not extending EPA jurisdiction over previously unregulated sources. This decision however has not been limited to just environmental law. In *U.S. v. Messina*, 806 F.3d 55, 67 (2d Cir. 2015), analyzing the language of the Mandatory Victims Restitution Act of 1996, the court relied on *UARG v. EPA*, to declare that plain meaning statutory language did not require additional inquiry.

273. “To sum up: We hold that EPA exceeded its statutory authority when it interpreted the Clean Air Act to require PSD and Title V permitting for stationary sources based on their greenhouse-gas emissions. Specifically, the Agency may not treat greenhouse gases as a pollutant for purposes of defining a “major emitting facility” (or a “modification” thereof) in the PSD context or a “major source” in the Title V context. To the extent its regulations purport to do so, they are invalid. EPA may, however, continue to treat greenhouse gases as a “pollutant subject to regulation under this chapter” for purposes of requiring BACT for “anyway” sources.” *UARG*, slip op. at 29.

274. *See supra* notes 183-95 and accompanying text.

costs and benefits accordingly. The *UARG* ‘tailoring’ opinion rejected the agency’s primary rationale for deference.<sup>275</sup>

### *C. Required Consideration of Regulatory Costs*

#### *1. Mercury and Air Toxics Standards*

Mercury regulation of power plant emissions originated before the Obama Administration, despite its imprint and litigation surrounding it being associated with the Obama Administration CPP. In 2005, EPA promulgated regulations establishing a cap-and-trade system to limit emissions of mercury from coal-fired power plants. Immediately, the rules were challenged; the D.C. Circuit Court of Appeals struck and vacated the mercury regulation in 2008.<sup>276</sup>

EPA thereafter agreed to propose and promulgate Maximum Achievable Control Technology (MACT) Mercury Air Toxics standards for mercury emissions before the end of 2011.<sup>277</sup> “The final rule sets standards for all hazardous air pollutants . . . emitted by coal- and oil-fired electric generating units . . . with a capacity of 25 megawatts or greater.”<sup>278</sup> Any existing source would have approximately take four years to comply with the new MATS, and then, under the Clean Air Act, could be granted an additional year by its state.<sup>279</sup>

Section 112(n) of the Clean Air Act authorizes EPA to regulate hazardous air pollutants from power plants only if it concludes that

275. See *Arlington v. FCC*, 133 S. Ct. 1863 (2013); “[T]he question a court faces when confronted with an agency’s interpretation of a statute it administers is . . . whether the agency has ‘stayed within the bounds of its statutory authority.’ *Arlington v. FCC*, No. 11–1545, slip op. at 5 (S. Ct. 2013) (emphasis deleted).” *Id.* at 10 (citing *Arlington v. FCC*, 133 S. Ct. 1863 (May 20, 2013)).

276. *N.J. v. EPA*, 517 F.3d 574, 579–84 (D.C. Cir. 2008) (vacating the mercury rule).

277. National Emission Standards for Hazardous Air Pollutants from Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 77 Fed. Reg. 9304 (Feb. 16, 2012) (to be codified at 40 C.F.R. pts. 60, 63). EPA stated that the standards for existing units, promulgated February 16, 2012, could be met by fifty-six percent of coal-and oil-fired electric generating units using pollution control equipment already installed; the other forty-four percent would be required to install technology that would reduce uncontrolled mercury and acid gas emissions by about ninety percent, at an annual cost of 9.6 billion dollars.

278. EPA, BASIC INFORMATION, <https://www.epa.gov/mats/basic-information-about-mercury-and-air-toxics-standards>; National Emission Standards for Hazardous Air Pollutants, 77 Fed. Reg. 9304. This affects larger coal plants, if coal is greater than ten percent of fuel input, and the unit is greater than twenty-five Mw capacity, produces electricity for sale, and supplies more than one-third of its potential output to any utility power distribution system, unless its annual capacity factor is less than eight percent of rating (i.e. only used for peaking purposes). See *id.* at 9309, 9369.

279. *Id.*

regulation is “appropriate and necessary.”<sup>280</sup> In reaching that conclusion, EPA stated that cost was irrelevant, and this was found by the Supreme Court to be beyond the bounds of reasonable interpretation and was ‘capricious’ regarding what was “appropriate and necessary.”<sup>281</sup> The new Mercury Air Toxic Standards (MATS) promulgated by EPA were estimated to avert up to 11,000 premature deaths, 4,700 heart attacks, and 130,000 asthma attacks every year.<sup>282</sup> However, virtually none of this was related to what the rule regulated directly.<sup>283</sup>

Almost all of the value of estimated avoided deaths and monetized benefits come from the rule’s effect on emissions of particulates, ‘co-benefits,’ rather than from identified reduction of mercury and other air toxic chemical exposure.<sup>284</sup> What made the rule more controversial is that the co-benefits associated with fine particulate matter (“PM<sub>2.5</sub>”) reductions comprised the overwhelming majority of all benefits attributed to the MATS regulations by EPA.<sup>285</sup> PM<sub>2.5</sub> is already otherwise heavily regulated as a criteria pollutant by EPA under other NAAQS provisions of the Act and regulations.<sup>286</sup> EPA designed the rule, in part, to achieve through executive action PM<sub>2.5</sub> emissions reductions that were in excess of what it could lawfully compel using provisions of the Act authorizing direct regulation of PM<sub>2.5</sub>. MATS was specifically aimed at reducing power plants’ emissions of toxic air pollutants rather than criteria pollutants, including toxic arsenic, chromium, nickel, hydrochloric acid and hydrofluoric acid, in addition to mercury.<sup>287</sup>

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280. 42 U.S.C. § 7412(n)(1)(A).

281. *Mich. v. EPA*, 135 S. Ct. 2699, 2710-11 (2015).

282. EPA, MATS-HEALTHIER AMERICANS (Nov. 2012), <https://www.epa.gov/mats/healthier-americans>.

283. See *supra* text accompanying notes 205-07.

284. For more in-depth discussion, see *supra* Section III.D.

285. See *supra* text accompanying notes 205-07.

286. 40 C.F.R. Part 50.

287. Clean Air Act §§ 111, 112, 42 U.S.C. §§ 7411, 7412 (2013). See Reconsideration of Certain New Source Issues, 78 Fed. Reg. 24,073, (Apr. 24, 2013); EPA, FACT SHEET: MERCURY AND AIR TOXICS STANDARDS FOR POWER PLANTS 1, <https://www.epa.gov/sites/production/files/2015-11/documents/20111221matsummaryfs.pdf>. Regarding HAPs, see FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS, *supra* note 77, at 574. The 1990 amendments to the Clean Air Act included the HAPs and “Good Neighbor” provisions, which provided the statutory authority for EPA to implement MATS and CSAPR, respectively. Clean Air Act Amendments of 1990, 101 Pub. L. No. 549, 104 Stat. 2399; National Emission Standards for Hazardous Air Pollutants, 77 Fed. Reg. 9304, 9425-28 (Feb. 16, 2012); Federal Implementation Plans, 76 Fed. Reg. 48,208, 48,216 (Aug. 8, 2011). The 1999 amendments revised the NSPS provision which authorized EPA to apply MATS to new coal- and oil-fired power plants. Chemical Safety Information, Site Security and Fuels Regulatory Relief Act of 1999, 106 Pub. L. No. 40, 113 Stat. 207; Clean Air Act § 111, 42 U.S.C. § 7411.

In both motive and its calculus, this closely parallels the ongoing CPP battle:

- It was designed economically to discourage operation of coal-fired power plants
- It was not cost-effective unless unregulated criteria pollutant ‘co-benefits’ were counted
- Indirect, unregulated ‘co-benefits’ comprised the vast majority of benefits to make the regulation cost-beneficial

## 2. Legal Challenge

Numerous parties petitioned the courts for review of the MATS mercury and air toxics rule, contending that EPA failed to conduct a cost-benefit analysis or cost consideration in its initial determination that control of air toxics from electric power plants was “appropriate and necessary,” and moreover, alleged that the agency’s later cost-benefit analysis demonstrated that the rule’s direct benefits failed this test.<sup>288</sup> A circuit court reviews a challenged agency actions pursuant to § 706(2)(A) of the Administrative Procedure Act, under an “arbitrary [and] capricious” standard.<sup>289</sup> The Act requires federal agencies to consider on the record public comments to proposed rules.<sup>290</sup> In a different energy rule challenge, the D.C. Circuit construed whether it was arbitrary and capricious when FERC did not respond to the petitioner’s objections to a rule or order.<sup>291</sup> The court held that the agency’s decision must answer and address seemingly legitimate comments and objections to satisfy the Administrative Procedure Act standard,<sup>292</sup> and the agency decision was arbitrary and capricious once the agency failed to address an affected party’s objections.<sup>293</sup>

When challenged regarding the MATS rule, the D.C. Circuit Court of Appeals found that the action was not arbitrary and capricious because EPA demonstrated a reasonable connection between its actions and the record of decision, and it was accorded *Chevron* deference.<sup>294</sup> A

288. TOO MUCH, TOO LITTLE, OR ON TRACK?, *supra* note 59, at 19.

289. 5 U.S.C. § 706(2)(A) (“The reviewing court shall . . . hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law. . .”).

290. FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS, *supra* note 77, at 47.

291. PPL Wallingford Energy LLC v. Fed. Energy Regulatory Comm’n, 419 F.3d 1194, 1198 (D.C. Cir. 2005).

292. *Id.*

293. *Id.* at 1200.

294. U.S. CHAMBER LITIG. CTR., STALLION ENERGY CENTER LLC, ET AL. V. ENVIRONMENTAL PROTECTION AGENCY, <https://www.chamberlitigation.com/cases/white-stallion-energy-center-llc-et-al-v-environmental-protection-agency-epa-12-1100>.

dissenting opinion agreed with the industry petitioners that EPA unreasonably excluded cost considerations and economic impacts when determining whether MACT regulation of power plant hazardous air pollutants (HAPs) is “appropriate and necessary.”<sup>295</sup> The NAAQS provisions specifically do not provide for cost considerations.<sup>296</sup> By contrast, for MACT regulation of power plant HAPs as relevant with MATS, pursuant to §112(n)(1)(A), has more flexible language on “appropriate and necessary” regulation.<sup>297</sup>

When the D.C. Circuit Court upheld the U.S. Environmental Protection Agency’s Mercury and Air Toxics Standards applying to existing coal-and oil-fired electric generating units, it relied in part upon Supreme Court precedent establishing that EPA is under no obligation to consider costs in establishing NAAQS under other provisions of the Clean Air Act that similarly fail to mention cost as a relevant consideration.<sup>298</sup> On that issue the court split, but the majority deferred to EPA’s technical judgment.<sup>299</sup>

The matter proceeded on appeal to the Supreme Court by a coalition of more than twenty states.<sup>300</sup> During oral arguments members of the Supreme Court were critical of EPA cost-benefit analysis which attributed billions of dollars in annual public health co-benefits to reduction of fine particulate matter and other pollutants regulated under other sections of the Clean Air Act other than the MATS mercury

295. The dissent by Judge Kavanaugh believed that the majority over-read the ruling in *Whitman*, by ignoring the important difference between how the Clean Air Act provisions govern NAAQS rulemaking and the MACT regulation of power plant HAPs. *Whitman* stated that the EPA may not take costs into consideration when setting national ambient air quality standards (NAAQS). *Whitman v. Am. Trucking Assoc., Inc.*, 175 F.3d 1027 (2001); 5 U.S.C. §§ 108(a), 109(b).

296. 42 U.S.C.A. §§ 7408(a); 42 U.S.C.A. §§ 7409(b)(1). What this means is that if an air pollutant is emitted by “numerous or diverse mobile stationary sources and the associated air pollutant is reasonably anticipated to endanger public health or welfare, then pursuant to § 108(a), the EPA must establish NAAQS for those pollutants, and pursuant to § 109(b), those standards must be “requisite to protect public health with an adequate margin of safety.”

297. 42 U.S.C. § 7421(n)(1)(A). This requires the EPA to study and issue a report on the public health hazards anticipated to occur as a result of power plant HAP emissions, and then apply MACT regulation “if” the Administrator finds such regulation is “appropriate and necessary,” which are not defined.

298. *White Stallion Energy Center, LLC v. EPA*, No. 12-1100, 748 F.3d 1222 (D.C. Cir., Apr. 15, 2014). A total of thirty petitions for review, including petitions brought by twenty-four states, were filed in the D.C. Circuit matter.

299. This included challenges to EPA’s determination of what was achievable by the best performing twelve percent of sources (i.e., the “MACT floor”) and the supporting data. *Id.* at 1250-1251.

300. *Mich. v. EPA*, 135 S. Ct. 2699, 2699-2704 (2015). The court granted certiorari to and consolidated three separate petitions filed by the Utility Air Regulatory Group, the National Mining Association and twenty-one states. Fifteen states supported EPA’s MATS regulation before the Court.



standards.<sup>301</sup> EPA could only quantify four to six million dollars in benefits to reductions of hazardous air pollutants, a fraction of one percent of the EPA-claimed long-term benefits of thirty-seven to ninety billion dollars annually; EPA provided no statistical basis or medical proof.<sup>302</sup> Chief Justice Roberts called it an “end-run” around the statutory language which “raises the red flag” regarding counting as much as ninety billion dollars of benefits under the MATS rule from reductions of pollutants that are regulated under other sections of the Clean Air Act.<sup>303</sup> The Supreme Court thereafter overturned MATS because:

EPA must consider cost—including cost of compliance—before deciding whether regulation is appropriate and necessary . . . . One would not say that it is even rational, never mind ‘appropriate,’ to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits.<sup>304</sup>

The majority in *Michigan* stated that “no regulation is ‘appropriate’ if it does significantly more harm than good.”<sup>305</sup> Quoting Justice Breyer’s concurring opinion in *Riverkeeper*, the majority further reasoned that:

Agencies have long treated cost as a centrally relevant factor when deciding whether to regulate. Consideration of cost reflects the understanding that reasonable regulation ordinarily requires paying attention to the advantages *and* the disadvantages of agency decisions. It also reflects the reality that “too much wasteful expenditure devoted to one problem may well mean considerably fewer resources available to deal effectively with other (perhaps more serious) problems.” Against the backdrop of this established administrative practice, it is unreasonable to read an instruction to an administrative agency to determine whether “regulation is appropriate and necessary” as an invitation to ignore cost.<sup>306</sup>

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301. See Patrick Ambrosio, *High Court Appears Split on EPA Decision Not to Consider Cost of Mercury Regulation*, BLOOMBERG BNA, <https://www.bna.com/high-court-appears-n17179924569/>. During oral argument, Justice Antonin Scalia described EPA as an “outrageously expensive” agency action where the cost vastly exceeds the benefit as a “classic arbitrary and capricious” act, “I would think that’s a violation of the Administrative Procedure Act, even without the word ‘appropriate’” *Id.* Chief Justice John Roberts noted that the EPA “deliberately tied its hands” where “agencies usually like to maintain for themselves as much discretion as they can;” “It’s a very important principle of administrative law that we will only uphold a rule based on the arguments that were considered and addressed by the agency.” *Id.*

302. *Mich.*, 135 S. Ct. at 2706.

303. See Ambrosio, *supra* note 301.

304. *Mich.*, 135 S. Ct. at 2707, 2711-12.

305. *Id.* at 2707.

306. *Id.* at 2707-08.

There is no prior precedent on this benefit-accounting issue. The *Michigan* Supreme Court decision did not dictate the future EPA choice of cost analysis.<sup>307</sup> However the agency chooses it, its methodology still can be reviewed by the Supreme Court under the “hard-look” doctrine established in *Citizens to Preserve Overton Park v. Volpe*.<sup>308</sup> This decision was roundly criticized by former Supreme Court Justice John Paul Stevens, who noted its truncation of his decision for deference in *Chevron*:

Ignoring dictionary definitions of the adjective “appropriate” (which do not mention the word “costs”) and the fact that the word “necessary” might well impose a duty to regulate even if costs were excessive, the Court held that the EPA’s initial decision to regulate was defective because it had failed to include any reference to the costs of regulation. Instead of simply accepting the plain meaning of a Congressional command or deferring to the agency’s reasonable interpretation of a statute that it administers—as *Chevron* requires—the Court invalidated regulations that took years to draft... As a former English major in college, and as the author of the majority opinion in *Chevron*, I find that conclusion truly mind-boggling. Such a free-wheeling statutory decision can do even more harm—both to the public health and to the Court itself—than misinterpretations of the Constitution.<sup>309</sup>

Where *Chevron* does not apply, courts apply the arbitrary and capricious standard of review.<sup>310</sup> If *Chevron* deference does not apply to a particular agency action, then under the Supreme Court *Skidmore* decision, while not controlling upon the courts, this presumptively causes the body of agency experience and informed judgment to serve as a guide for the court.<sup>311</sup> An agency is not afforded any deference to its position where it makes a determination that is not embodied in a regulation.<sup>312</sup> Deference is only afforded to an agency interpretation where “it appears that congress delegated authority to the agency to make rules carrying the force of law, and that the agency interpretation claiming deference was promulgated in the exercise of that authority.”<sup>313</sup>

There is general judicial deference to the substance of administrative rules if it turns on disputed issues of technical fact or

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307. *Id.* at 2711-12.

308. *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1971).

309. John Paul Stevens Speech, *supra* note 20.

310. *See Volpe*, 401 U.S. 402; *see also* FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS, *supra* note 77, at 69-73.

311. *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944).

312. *U.S. v. Mead Corp.*, 533 U.S. 218, 221 (2001).

313. *Id.* at 227.

policy, or if the statute does not precisely answer the question the rule addresses, as in *Chevron*. Interpretive rules that are not rulemakings and do not enjoy the strong deference accorded legislative rulemaking by an agency, but still enjoy an initial presumption of (*Skidmore*) deference.<sup>314</sup>

In some cases, courts will strike interpretive rules made by an agency on the ground that the rules were in fact legislative rules that require a full notice and comment, under formal or informal rulemaking.<sup>315</sup> While distinguishing between legislative and interpretive rules thus is critical, there is little agreement among the courts on this distinction. Where mathematical or technical standards are imposed, or a new duty is imposed on a party by the rule, this typically requires the formal requisites of APA notice and comment.<sup>316</sup>

Justice Antonin Scalia noted in *Whitman v. American Trucking Associations* that the statutory language is “absolute.”<sup>317</sup> The Supreme Court in *United States v. Mead Corp.* acknowledged that *Chevron* recognizes that Congress can be found to have implicitly delegated discretionary authority to an administrative agency.<sup>318</sup> In *City of Arlington v. FCC*, the majority held that *Chevron* deference applies to an agency’s interpretation of the scope of its own statutory jurisdiction: “statutory ambiguities will be resolved, within the bounds of reasonable interpretation, not by the courts but by the administering agency.”<sup>319</sup> The Supreme Court held that federal agencies are entitled to deference to agency discretion in devising regulations, as per *Chevron*.<sup>320</sup> This overruled a determination that federal rules did not defer sufficiently to state implementation.<sup>321</sup> However, there were other precursors of this

314. *Skidmore*, 323 U.S. at 140; *Christensen v. Harris*, 529 U.S. 576, 587 (2000) (An agency’s interpretive rule concerning a regulation is given stronger deference by the court, than an interpretive rule concerning a statute); *Mead*, 533 U.S. at 221.

315. *Id.*

316. *Columbia Falls Aluminum Co. v. EPA*, 139 F.3d 914, 924 (D.C. Cir. 1998) (finding EPA rulemaking under Section 3004 of RCRA arbitrary and capricious where the agency relied on an analytical model that they knew was flawed and not an accurate predictor).

317. *Whitman*, 531 U.S. at 465. Justice Scalia, reflecting on the proper role of the judiciary, wrote that the statute “unambiguously bars cost considerations from the NAAQS-setting process, and thus ends the matter for us as well as the EPA.” *Id.* at 471.

318. *Mead*, 533 U.S. at 229.

319. *Arlington v. FCC*, 133 S. Ct. 1863, 1868 (2013). The Court noted that, under *Chevron*, the Court must first ask whether Congress directly spoke to the precise question at issue; if so, the Court must give effect to Congress’s unambiguously expressed intent, and if “the statute is silent or ambiguous,” the court must defer to the administering agency’s construction of the statute so long as it is permissible. *Id.* (quoting *Chevron v. Nat’l Res. Def. Council*, 467 U.S. 837, 842-43 (1984)). See also *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366, 397 (1999).

320. *EPA v. EME Homer City Generation*, 134 S. Ct. 1584, 1609-10 (2014).

321. *Id.* While employing a different mechanism than CAIR to address cross-state pollution, the D.C. Circuit found that it required some states to reduce emissions by more than

*Chevron* retreat. Chief Justice Roberts’ dissenting opinion in *Arlington v. FCC* warned about “the danger posed by the growing power of the administrative state.”<sup>322</sup>

The Clean Air Act also provides no detailed guidance as to where the cost line lies or how it should be calculated. The Act’s Section 112 does not require that HAP emission control costs can be compared with benefits of reduced HAP toxic pollutants.<sup>323</sup> The *Michigan* Court noted that costs include the upfront cost of implementation, but also include the cost of compliance with the rulemaking.<sup>324</sup> If challengers can successfully categorize reduced revenues from fewer generation hours of operation of a facility as costs of complying with the regulation, EPA’s rulemaking could be deemed as not benefit-positive and unreasonable.

Citing *King v. Burwell*,<sup>325</sup> the challengers submitted that the EPA would require explicit authority from Congress to regulate an area in which it does not regularly participate (e.g. electricity generation) or to implement aggressive measures to reorganize how power is generated and sold in America.<sup>326</sup> In *King*, the court held that the Internal Revenue Service would not be granted *Chevron* deference because the Internal Revenue Service IRS) does not have expertise in crafting health insurance policies; Congress would have to grant express authority to the agency.<sup>327</sup>

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what they contributed to downwind state pollution. *EME Homer City Generation*, 696 F.3d 7, 25 (D.C. Cir. 2012), *rev’d*, 134 S. Ct. 1584 (2014). Fifteen states sought review of CSAPR, while nine states intervened to support the rule. *Id.* at 9-10.

322. *Arlington*, 133 S. Ct. at 1879 (Robert, C.J., dissenting).

323. 42 U.S.C. § 7412.

324. The Environmental Protection Agency (EPA) must consider cost—including, most importantly, cost of compliance—before deciding whether regulation of power plants under the Clean Air Act is appropriate and necessary. *See* Clean Air Act, § 112(n)(1)(A), 42 U.S.C.A. § 7412(n)(1)(A). *Mich. v. EPA*, 135 S. Ct. at 2711.

325. *King v. Burwell*, 135 S. Ct. 2480 (2015).

326. Brief Amicus Curiae of Pac. Legal Found. in Support of Petitioner at 5, *King*, 135 S. Ct. 2480 (No. 14–114); *see also* Brief of 166 State & Local Bus. Ass’ns as Amici Curiae in Support of Petitioners at 25-26, *King*, 135 S. Ct. 2480 (No. 14–114) (citing *FPC v. S. Cal. Edison Co.*, 376 U.S. 205, 215-16 (1964)).

327. “When analyzing an agency’s interpretation of a statute, we often apply the two-step framework announced in *Chevron*. Under that framework, we ask whether the statute is ambiguous and, if so, whether the agency’s interpretation is reasonable. This approach is premised on the theory that a statute’s ambiguity constitutes an implicit delegation from Congress to the agency to fill in the statutory gaps. In extraordinary cases, however, there may be reason to hesitate before concluding that Congress has intended such implicit delegation.” *King*, 135 S. Ct. at 2488 (internal quotation marks and citations omitted).

### 3. Next Steps

Similar arguments were expressed by others opposing the MATS rule based on EPA's alleged double-counting of benefits. The EPA's reliance on the benefits from these massive criteria pollutant reductions, which occurred due to implementation of the NAAQS program to justify MATS, could be viewed as double- or triple-counting of benefits.<sup>328</sup> EPA admitted that the majority of the total benefits are due to reduction of particulate matter and sulfur dioxide, which as criteria pollutants rather than hazardous pollutants, are subject to "stringent" regulations under the separate NAAQS.<sup>329</sup>

A remaining issue is where  $PM_{2.5}$  is reduced below its NAAQS standards, which already provide an "adequate margin of safety" to human health, whether counting additional reductions in  $PM_{2.5}$  occurring in already-NAAQS-compliant areas is a countable benefit from a MATS rule unrelated to  $PM_{2.5}$ ?<sup>330</sup> This matter and its issues bear a close resemblance to the Clean Power Plan dispute,<sup>331</sup> also counting a very large amount of co-benefits from reduction of other than the regulation's targeted emissions  $CO_2$ , and counting many international climate benefits which were eighty-five percent of total benefits in proportion to relatively limited domestic climate benefits, evaluated against substantial future 100 percent domestic compliance costs.<sup>332</sup>

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328. Comments of the National Mining Association on Supplemental Finding That It Is Appropriate and Necessary to Regulate Hazardous Air Pollutants From Coal-and Oil-Fired Electric Utility Steam Generation Units, 80 Fed. Reg. 75,025 (Dec. 1, 2015), <https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OAR-2009-0234-20531&attachmentNumber=1&disposition=attachment&contentType=pdf>.

329. *Id.*

330. SUSAN E. DUDLEY, GEORGE WASHINGTON UNIV. REGULATORY STUDIES CTR., PUBLIC INTEREST COMMENT ON THE ENVIRONMENTAL PROTECTION AGENCY'S PROPOSED SUPPLEMENTAL FINDING THAT IT IS APPROPRIATE AND NECESSARY TO REGULATE HAZARDOUS AIR POLLUTANTS FROM COAL AND OIL FIRED ELECTRIC UTILITY STEAM GENERATING UNITS (Jan. 11, 2016), <https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OAR-2009-0234-20527&attachmentNumber=1&disposition=attachment&contentType=pdf>; *see also* MATS RIA Final, page 224. "Approximately 11% of the avoided premature deaths occur at or above an annual mean  $PM_{2.5}$  level of  $10 \mu g/m^3$  (the LML of the Laden et al. 2006 study), and about 73% occur at or above an annual mean  $PM_{2.5}$  level of  $7.5 \mu g/m^3$  (the LML of the Pope et al. 2002 study). As we model avoided premature deaths among populations exposed to levels of  $PM_{2.5}$  that are successively lower than the LML of each study our confidence in the results diminishes." *See also* [http://www.iseepi.org/Docs/PM2.5\\_LettertoEPA\\_posting.pdf](http://www.iseepi.org/Docs/PM2.5_LettertoEPA_posting.pdf). The International Society for Environmental Epidemiology (ISEE) responding to the EPA's invitation for comments on NAAQS standards update, recommends to reduce annual  $PM_{2.5}$  to the level of ten  $\mu g/m^3$  as recommended by WHO's assessment that "adverse effects on health cannot be entirely ruled out even below that level." *See also* MATS RIA Final, fig. 5-15.

331. *See* Section III.C.

332. *See supra* note 184.

While the *Michigan* Court suggested that agencies should generally consider costs in regulatory decision-making, it also made clear that “it will be up to the agency to decide . . . how to account for cost.”<sup>333</sup> In *Michigan*, both the majority and the dissent took pains to make clear that they were not requiring agencies “to conduct a formal cost-benefit analysis in which each advantage and disadvantage is assigned a monetary value.”<sup>334</sup> However, they had to reasonably consider costs.<sup>335</sup> The ultimate question remains whether a regulation is reasonable if its actual targeted costs dramatically exceed the benefits of the rule. Fifteen states—Michigan, Alabama, Arizona, Arkansas, Kansas, Kentucky, Nebraska, North Dakota, Ohio, Oklahoma, South Carolina, Texas, West Virginia, Wisconsin, and Wyoming—sued EPA in the Court of Appeals for the District of Columbia again in 2016, for re-affirming its originally Supreme Court remanded MATS rule.<sup>336</sup>

Several recent decisions of the Supreme Court scrutinize deference to the executive branch. In *UARG v. EPA*, the Supreme Court highlighted that where a statutory interpretation by EPA “would bring about an enormous and transformative expansion in EPA’s regulatory authority,” a court should demand prior “clear congressional authorization.”<sup>337</sup> The challengers to the CPP regulation relied on this language from *UARG* and *King v. Burwell* to argue in their brief:

EPA...purports to have discovered sweeping authority in Section 111(d) of the Clean Air Act — a provision that has been used only five times 147 in 45 years—to issue a “Power Plan” that forces States to fundamentally alter electricity generation throughout the country.

But as the Supreme Court recently said, courts should “greet . . . with a measure of skepticism” claims by EPA to have “discover[ed] in a long-extant statute an unheralded power to regulate a significant portion of the American economy” and make “decisions of vast economic and political significance,” [UARG], especially in areas outside an agency’s “expertise,”<sup>338</sup>

The MATS rule is now languishing in the United States Court of Appeals of District of Columbia, as is the CPP challenge. What both EPA regulations of MATS and CPP share in common is that in neither

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333. *Mich. v. EPA*, 135 S. Ct. at 2702.

334. *Id.* at 2711.

335. *Id.*

336. *See Mich. v. EPA*, Petition for Review Case No. 16-1204 (D.C. Cir. June 24, 2016) [https://www.bloomberglaw.com/public/desktop/document/Michigan\\_Attorney\\_General\\_Bill\\_Schuette\\_v\\_US\\_Environmental\\_Protec?1469159801](https://www.bloomberglaw.com/public/desktop/document/Michigan_Attorney_General_Bill_Schuette_v_US_Environmental_Protec?1469159801).

337. *UARG v. EPA*, 134 S. Ct. 2427, 2444 (2013).

338. *See, e.g.*, Brief for Petitioner at 3-4, 23-35, 66, *King*, 135 S. Ct. 2480 (No. 14-114); *King*, 135 S. Ct. at 2489.

case had the executive branch calculated or created a record of the costs and benefits of the rules. In each case, the costs were billions of dollars annually imposed not on the government, but on private stakeholders. In neither case, had the executive branch regulations been mandated or vetted by Congress. And in each case, the reduction of the pollutant (mercury in the MATs rule and CO<sub>2</sub> in the CPP, respectively) created a miniscule amount of *direct* public health benefits scaled against much more significant costs for private industry to implement the reductions.<sup>339</sup>

In both cases, to alter the lopsided outcome of costs far exceeding direct benefits of the pollutant specifically regulated by the rule promulgated by the agency, EPA added estimated indirect incidental “co-benefits” related to reduction of pollutants which were not regulated by the rule. This method of counting of so-called “co-benefits” is additive to the benefits side to the significant extent to flip the outcome of the cost/benefit analysis from negative to positive. Soon after its 2015 *Michigan* decision injecting costs into administrative law as a new prudential requirement,<sup>340</sup> the Supreme Court took the rare step of staying enforcement of the EPA regulation which was the foundation of the Obama Administration’s climate change policy, more than two years before a challenge to the regulation could even reach it.<sup>341</sup>

We are seeing a tectonic shift in the administrative state. After the *Michigan* remand of regulations affecting coal-fired power plants, the Supreme Court took the rare step of staying enforcement of a second regulation, CPP affecting coal-fired power plants, which had similar cost issues, more than two years before a CPP challenge could even reach it.<sup>342</sup> This alteration in the powers of the executive branch comes into even more sharp focus now that the new Trump Administration is stretching the contours of unilateral executive action. Can an Executive agency any longer add estimated indirect incidental “co-benefits” not covered by what a rule regulates or addresses, to flip the apparent cost-effectiveness and impact assessment of a proposed rule? This calculus will alter the twenty-first century regulated state under evolving jurisprudence.

What both stricken (MATs, the *Michigan* precedent) and stayed (the Clean Power Plan, *Virginia/Murray stay*) regulations shared in common is that in neither case had the executive branch calculated or created a sufficient record of the costs and benefits of the rules. In each

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339. See *supra* Section IV.D & III.C.

340. *Mich.*, 135 S. Ct. at 2726.

341. See *W. Va. v. EPA*, 136 S. Ct. 1000 (2016).

342. *Id.*

case, the costs were billions of dollars annually imposed on private stakeholders, not the government. And in each case, the reduction of the pollutant (mercury and CO<sub>2</sub>, respectively) created a miniscule amount of *direct* public health benefits scaled against much more significant costs for private industry to implement the reductions.

The applications for a stay and granting it relied heavily on *Michigan v. EPA*,<sup>343</sup> and *UARG v. EPA*.<sup>344</sup> The stay of the Clean Power Plan reflects the progressive retreat from *Chevron* deference afforded to agency decisions, incorporated in *UARG v. EPA*,<sup>345</sup> *King v. Burwell*,<sup>346</sup> and *Michigan v. EPA*.<sup>347</sup> These cases shift the balance of power to construe Congressional statutes from the executive branch to the courts.

#### V. STRATEGIC ASSESSMENT: IMPACT OF CPP STAY OR REPEAL

Some are now noting that the thirty-two percent reduction the Obama Administration CPP was designed to achieve between 2022-2030 for CO<sub>2</sub> reductions, in fact, was and is occurring anyway more than five years before the CPP would have started to exert any effect.<sup>348</sup> A recent analysis by the Rhodium Group estimated that United States electricity emissions are currently on track to fall twenty-seven to thirty-five percent below baseline 2005 levels by 2030, even if the CPP regulation is repealed.<sup>349</sup> This is approximately in the range of what the thirty-two percent reduction that the Clean Power Plan originally sought to mandate.<sup>350</sup> In Virginia, a state with a large amount of coal-fired power generation, between 2000-2014, without the CPP in place during those fifteen years, the state reduced power plant CO<sub>2</sub> emissions by thirty percent.<sup>351</sup> Achieving only half that amount of additional reductions in the remaining sixteen years from 2014-2030 would meet the CPP requirements.<sup>352</sup>

343. *Mich.*, 135 S. Ct. at 2707-08.

344. *UARG*, 134 S. Ct. 2427. The application of the twenty-nine states for a stay referred to and relied on *UARG v. EPA* throughout.

345. *Id.* at 2444 (disfavoring new agency interpretation).

346. *King v. Burwell*, 135 S. Ct. 2480, 2488-89 (2015) (disregarding opinion of non-expert agencies).

347. *Mich.*, 135 S. Ct. at 2707-08 (prerequisite *de novo* agency consideration of costs before regulation).

348. John Larsen & Whitney Herndon, *What the CPP Would Have Done*, RHODIUM GRP. (Oct. 9, 2017), <http://rhg.com/notes/what-the-cpp-would-have-done>.

349. *Id.*

350. *Id.*

351. VIRGINIA DEP'T OF ENVTL. QUALITY, PRESENTATION TO THE GOVERNOR'S ORDER 57 WORKGROUP, VIRGINIA'S CARBON REDUCTION EFFORTS (Aug. 31, 2016), <https://www.naturalresources.virginia.gov/media/governorvirginiagov/secretary-of-natural-resources/pdf/deq-eo-57-presentation.pdf>.

352. *Id.*



CPP is not responsible for any CO<sub>2</sub> reductions during the Obama Administration, since it was not promulgated until 2015 and requires no reductions until 2022, well after the current four-year term of the Trump Administration.<sup>353</sup> The CPP would require nothing until its first requirements beginning in 2022, assuming that it is not delayed by litigation, which is currently occurring.<sup>354</sup> The final CPP rule was released in 2015, with its numbers based on 2014 energy market projections.<sup>355</sup> In the Annual Energy Outlook (AEO) released that year, the U.S. Department of Energy, and the Energy Information Administration (EIA) projected only modest recovery in power sector CO<sub>2</sub> emissions from 2012 lows to eight percent below 2005 levels by 2030.<sup>356</sup> If the U.S. is on track to achieve a thirty-two percent reduction from 2005 CO<sub>2</sub> levels, it has been achieving this in the past decade without a federal CPP or MATs regulations.

The Rhodium Group consultants' projections estimate that power sector CO<sub>2</sub> emissions would achieve twenty-seven to thirty-five percent reductions below 2005 levels even without the CPP or any element of it legally in force.<sup>357</sup> This forecast is based on lower cost electricity supply due to greater supply of natural gas from hydro-fracking technology which supply suppresses price, more aggressive lower-cost renewable energy development, and flatter demand for electric power than the U.S. Department of Energy Information Administration (EIA) predicted:

Gas prices have stayed lower for longer than EIA predicted, electricity demand has remained flat, rapidly declining wind and solar costs and a multi-year extension of the PTC and ITC have driven aggressive renewable energy deployment, and many coal-fired power plants have been retired.<sup>358</sup>

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353. See *supra* Section II.A.1.

354. See Jonathan H. Adler, *Placing the Clean Power Plan in Context*, WASHINGTON POST (Feb. 10, 2016), [https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/02/10/placing-the-clean-power-plan-in-context/?utm\\_term=.f4b07aaf7e5d](https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/02/10/placing-the-clean-power-plan-in-context/?utm_term=.f4b07aaf7e5d).

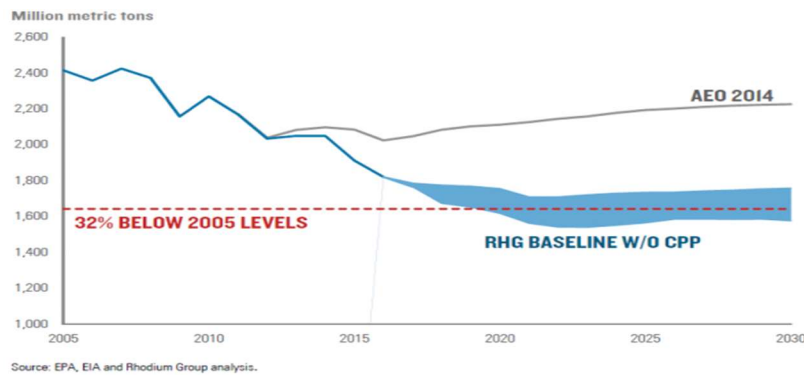
355. Larsen & Herndon, *supra* note 348.

356. See *id.* at fig. 3. The CPP was projected to reduce power sector CO<sub>2</sub> emissions thirty-two percent below 2005 levels by 2030.

357. *Id.*

358. *Id.*

The Rhodium analysis illustrates that the U.S. could achieve the 2032 CPP-required levels of CO<sub>2</sub> reduction from power plants a full decade in advance of that deadline from operating economic forces even without the CPP ever in force.<sup>359</sup> The U.S. could achieve the CPP 2032 carbon reduction goal by 2020 and maintain this level to 2032.<sup>360</sup> By this forecast of trends, the power sector carbon reduction objective is being achieved by basic economic forces, notwithstanding CPP regulation and the legal controversy surrounding it.



**Figure 3. Current Power Sector CO<sub>2</sub> Projections and EPA CPP Target<sup>361</sup>**

Under the CPP, states would have had the option to allow power plants to trade compliance credits with power generation plants in other states.<sup>362</sup> The CPP allows states to trade compliance credits and therefrom to claim or achieve CO<sub>2</sub> reduction compliance without a state itself reducing CO<sub>2</sub> emissions at all or to the degree required.<sup>363</sup> Surplus credits could be purchased by facilities in another state to show, paper “compliance” without reducing emissions inside the fence line of that state’s power generation facilities.<sup>364</sup> Rhodium’s study assumed that all states took advantage of trading to minimize costs where credit purchases were less expensive than actual in-state reductions, whereby the CPP in fact would have achieved no additional emission reductions in the future compared to business-as-usual, assuming that natural gas

359. *Id.*

360. *Id.* See also Figure 3.

361. Larsen & Herndon, *supra* note 348.

362. *Id.*

363. FACT SHEET: CLEAN POWER PLAN OVERVIEW, *supra* note 34.

364. See Emily Holden & Elizabeth Harball, *EPA Clean Power Plan: Start Trading Carbon, Please*, SCIENTIFIC AM. (Aug. 5, 2015), <https://www.scientificamerican.com/article/epa-clean-power-plan-start-trading-carbon-please/>.

remains cheap and renewable energy costs decline rapidly, as both have in recent years.<sup>365</sup> This business-as-usual scenario without CPP would realize zero to seventy-two million metric tons a year of carbon reduction with credit trading and more expensive gas and renewables during the 2022-2030 CPP compliance period.<sup>366</sup> With the highest renewable energy and natural gas prices analyzed by Rhodium, twenty-one states would have had to take additional action to comply with the CPP than what they were already on track to achieve in the absence of the CPP rule.<sup>367</sup>

Therefore, it is possible that the U.S. will achieve the CPP requirements and the Paris Accord international targets without the CPP in law and a decade ahead of schedule, based only on existing market forces and changes in power technology. If so, all of the assumed benefits would be achieved without incurring the regulatory costs. Time, over the next decade, will tell.

The Supreme Court in several decisions recently circumscribed court deference to administrative agency decisions. Citing *King v. Burwell*, the states maintained that an agency would require explicit authority from Congress to regulate in an area in which it does not regularly participate.<sup>368</sup> This Court stated that the retreat from *Chevron* agency deference is to be applied to matters of great “economic and political significance,” according to Chief Justice Robert in *King*.<sup>369</sup>

By analogy here, the CPP, an environmental regulation, elects to accomplish its CO<sub>2</sub> emission reductions by aggressive measures to reorganize how power is generated and sold in America. This raises the issue whether such discretion to influence electricity production is within the authority of EPA without any separate Congressional authority or delegation, or whether such authority over electricity production resides within FERC and the U.S. Department of Energy to exercise. FERC Commissioner Clark in Congressional testimony described the CPP and related EPA initiatives, from the perspective of the electric energy sector which FERC alone regulates in the United States, as a “jurisdictional train wreck.”<sup>370</sup>

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365. See Larsen & Herndon, *supra* note 348.

366. *Id.* See Figure 3.

367. *Id.*

368. *King v. Burwell*, 135 S. Ct. 2480, 2506 (2015).

369. *Id.* at 2483.

370. Garner, *supra* note 1.

## VI. TECHNOLOGY CHANGE INTERFACES WITH LAW

A. *The Future for Coal*

The ongoing legal contest regarding the CPP presages the recent controversy on the use of coal to power the U.S. economy which was elevated to a major issue in the most recent presidential election.<sup>371</sup> Yet, even before the future jobs of coal miners became a litmus issue in the 2016 presidential contest,<sup>372</sup> the Supreme Court reversed and remanded a significant Executive branch regulation because the agency failed to consider the costs that the regulation imposed on the U.S. economy.<sup>373</sup> The Obama Administration expressly declared that the CPP and MATs regulations were designed to frustrate ongoing and future use of coal in the United States for electric power generation.<sup>374</sup>

EPA’s CPP rule states that the “book life” of a coal plant is forty years, and that states, in their compliance filings, should consider not allowing operation of older coal plants under this rule.<sup>375</sup> EPA utilized a planning assumption which recommends that states and regional ISOs take natural gas combustion turbines, which were running only at a national forty to fifty percent operating capacity factor compared to their full potential, and increase those to a seventy-five percent operating capacity factor to displace coal-fired power, well within their ninety-one percent availability.<sup>376</sup>

The U.S. electric system traditionally has used coal-fired resources as its principal prime mover power generation technology since the first harnessing of electricity in the United States 135 years ago.<sup>377</sup> There are 400 U.S. coal-fired powered plants<sup>378</sup> which traditionally supplied more than half of U.S. electric power.<sup>379</sup> In nineteen of the fifty U.S. states,

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371. See Tim Boersma, Charles K. Ebinger, & Heather Greenley, *The Presidential Candidates’ Views on Energy and Climate*, BROOKINGS (June 9, 2016) <https://www.brookings.edu/blog/order-from-chaos/2016/06/09/the-presidential-candidates-views-on-energy-and-climate/>.

372. See Nicolas Loris, *The Many Problems of the EPA’s Clean Power Plan and Climate Regulations: A Primer*, HERITAGE FOUND., <http://www.heritage.org/environment/report/the-many-problems-the-epas-clean-power-plan-and-climate-regulations-primer>.

373. See *id.*

374. See *supra* at notes 56-58.

375. 80 Fed. Reg. 64661, 64872.

376. *Id.* at 64,799-64,801.

377. See JAMES G. SPEIGHT, *THE CHEMISTRY AND TECHNOLOGY OF COAL* 13 (3d ed. 2013); see also *supra* Figure 2.

378. John Myskens, Dan Keating, & Samuel Granados, *Mapping How the United States Generates its Electricity*, WASHINGTON POST (July 31, 2015) [hereinafter Myskens et al., *Mapping*], <http://www.washingtonpost.com/graphics/national/power-plants/>.

379. See *id.*; See also Joby Warrick, *White House Set to Adopt Sweeping Curbs on Carbon Pollution*, WASHINGTON POST (Aug. 1, 2015),

coal is the dominant source of electricity, and in thirteen of these nineteen states, coal supplies a majority of power generation.<sup>380</sup>

With or without court endorsement and deference to the Obama Administration's initiatives culminating in the CPP, the zenith of coal use in the U.S. is ebbing under current economic condition: Coal for power generation has been rapidly decreasing in the most recent decade, to where it now supplies barely one-third of U.S. electric power, with its share continuing to decrease.<sup>381</sup> There has been a dramatic exodus of coal: In 2012 there were 1,308 coal-fired generating units in the United States, totaling 310 Gigawatts (Gw) of capacity, of which 10.2 Gw of coal-fired capacity retired in 2012, and more each year since.<sup>382</sup> Sixty Gw of existing coal-fired power generation capacity are estimated to be shuttered between 2015 and 2020, with ninety percent of this coal decrease having occurred by 2016.<sup>383</sup> U.S. coal-fired generating capacity is projected to decrease to 262 Gw in 2040, which would constitute a fifteen percent decrease, according to the U.S. Energy Information Agency.<sup>384</sup>

### *B. Renewable Energy Escalation*

Natural gas powered generation and renewable electric energy quickly are supplanting coal generation in the last five years.<sup>385</sup> During the past decade the price of implementing many renewable energy alternatives has dropped dramatically.<sup>386</sup> For example, the cost of wind power has dropped within the range of being competitive with the price of some more traditional fossil fuel resources for the production of

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[https://www.washingtonpost.com/national/health-science/white-house-set-to-adopt-sweeping-curbs-on-carbon-pollution/2015/08/01/ba6627fa-385c-11e5-b673-1df005a0fb28\\_story.html](https://www.washingtonpost.com/national/health-science/white-house-set-to-adopt-sweeping-curbs-on-carbon-pollution/2015/08/01/ba6627fa-385c-11e5-b673-1df005a0fb28_story.html).

380. Myskens, et al., *Mapping*, *supra* note 378.

381. See Wendy Koch, *EPA Seeks 30% Cut in Power Plant Carbon Emissions by 2030*, USA TODAY (June 3, 2014), <http://www.usatoday.com/story/money/business/2014/06/02/epa-proposes-sharp-cuts-power-plant-emissions/9859913/>.

382. U.S. ENERGY INFO. ADMIN., AEO2014 PROJECTS MORE COAL-FIRED POWER PLANT RETIREMENTS BY 2016 THAN HAVE BEEN SCHEDULED, <http://www.eia.gov/todayinenergy/detail.cfm?id=15031> (last updated Mar. 10, 2014).

383. Michael Bastasch, *Report: EPA Regulations to Accelerate Coal Plant Shutdowns*, DAILY CALLER (Feb. 14, 2014), <http://dailycaller.com/2014/02/14/report-epa-regulations-to-accelerate-coal-plant-shutdowns/>.

384. *Id.*

385. See U.S. ENERGY INFO. ADMIN., NATURAL GAS, RENEWABLES PROJECTED TO PROVIDE LARGER SHARES OF ELECTRICITY GENERATION, (May 4, 2015), <http://www.eia.gov/todayinenergy/detail.cfm?id=21072>.

386. See *infra* notes 393-98.

electricity.<sup>387</sup> Wind, along with natural gas, has dominated new sources of electric energy deployed in the most recent decade.<sup>388</sup>

Use of renewable energy continues to grow rapidly in the United States. In 2013, electricity generated from renewable energy technologies, including conventional hydropower, represented thirteen percent of total U.S. electricity, up from nine percent in 2005.<sup>389</sup> In 2012, wind energy was the most deployed new U.S. electricity generation capacity, contributing forty-three percent of all new electric generation.<sup>390</sup> Wind energy provided 4.5 percent of total U.S. power supplies in 2013.<sup>391</sup> Since 2009, U.S. wind generation has tripled and solar generation has grown twentyfold.<sup>392</sup>

The cost to install photovoltaic solar panels has fallen dramatically; PV module prices have experienced a decline from around 1.90 dollars per watt in 2009 to 0.36 dollars per watt in 2017, and lower in some regions of the world.<sup>393</sup> Inverter prices, for the equipment necessary to convert photovoltaic direct current to alternating current so that it can be moved on the grid, have also declined by more than sixty percent in cost from 0.60 to 1.00+ dollars per watt in 2005 to under 0.20 dollars per watt in 2013.<sup>394</sup> This has allowed the solar photovoltaic market to grow at an average rate of more than forty percent each year since 2000.<sup>395</sup> Solar energy was forecasted to be cost competitive with retail electricity prices in forty-

387. Tara Patel, *Fossil Fuels Losing Cost Advantage Over Solar, Wind, IEA Says*, BLOOMBERG, Aug. 31, 2015, <http://www.bloomberg.com/news/articles/2015-08-31/solar-wind-power-costs-drop-as-fossil-fuels-increase-iea-says>.

388. SOLAR ENERGY INDUS. ASS'N, SOLAR INDUSTRY DATA: SOLAR INDUSTRY GROWING AT A RECORD PACE 2-3 (2018) <http://www.seia.org/research-resources/solar-industry-data>.

389. Clean Power Plan, 80 Fed. Reg. at 64,695 (referencing U.S. ENERGY INFO. ADMIN., ANNUAL ENERGY OUTLOOK 2015 WITH PROJECTIONS TO 2040 ES-6 (2015)).

390. Energy Dept. Reports: U.S. Wind Energy Production and Manufacturing Reaches Record Highs, ENERGY.GOV, (Aug. 6, 2013), <http://energy.gov/articles/energy-dept-reports-us-wind-energy-production-and-manufacturing-reaches-record-highs>.

391. Clean Power Plan, 80 Fed. Reg. at 64,803 (citing U.S. ENERGY INFO. ADMIN., MONTHLY ENERGY REVIEW 106 tbl. 7.2b (May 2015)).

392. *See id.*

393. WILSON RICKERSON, INT'L ENERGY AGENCY RENEWABLE ENERGY TECH. DEPLOYMENT (IEA-RETD), RESIDENTIAL PROSUMERS-DRIVERS AND POLICY OPTIONS (RE-PROSUMERS) 9 (Holly Wilson & Henry Barrett eds., Meister Consultants Group, 2014) (relying on Jade Jones, *Regional PV Module Pricing Dynamics: What You Need to Know*, GREEN TECH MEDIA (Nov. 22, 2013)); Nicholas Rinaldi, *Solar PV Module Costs to Fall to 36 Cents per Watt by 2017*, GREEN TECH MEDIA (June 18, 2013).

394. RICKERSON, *supra* note 393, at 9 (relying on Ian Clover, *IHS cuts global inverter market forecast in face of dramatic price drops*, PV MAG. (Oct. 16, 2013). *See also* NAVIGANT CONSULTING INC., A REVIEW OF PV INVERTER TECHNOLOGY COST AND PERFORMANCE PROJECTIONS 3 (Nat'l Renewable Energy Lab. 2006)).

395. RICKERSON, *supra* note 393, at 10.

seven U.S. states by 2016, with maintenance of current subsidies, according to Deutsche Bank.<sup>396</sup> Solar electric energy is now cost-competitive with traditional fossil fuels due to substantial subsidies<sup>397</sup> and it is projected to dramatically expand in use in the coming decade.<sup>398</sup>

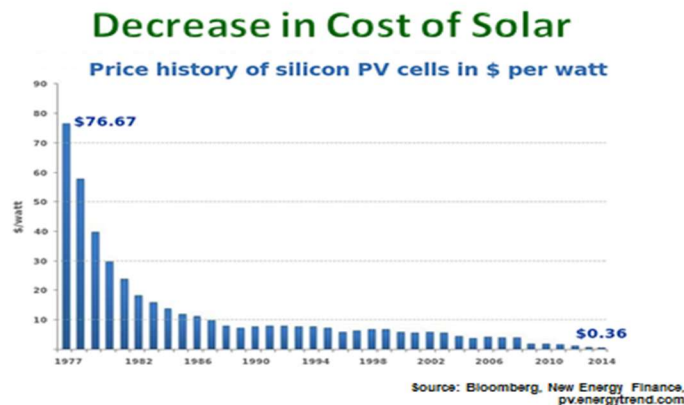


Figure 4

In a recent six-year period, the costs of solar photovoltaic cells and wind power has decreased by forty to sixty percent. See Figure 5. The global market for renewable energy is projected to grow to 460 billion dollars per year by 2030.<sup>399</sup> Wind is now the predominant new power generation source added each year.<sup>400</sup> As solar energy becomes the first choice for power generation technology for consumers, renewable

396. Ari Natter, *Solar Energy to Reach 'Grid Parity' by 2016 In Nearly All States, Deutsche Bank Predicts*, BLOOMBERG BNA (Oct. 27, 2014). This is based on the assumption that the cost of solar systems will decline by about twenty percent more, from less than three dollars per watt installed to less than 2.50 dollars per watt installed by 2016, resulting in a price in those states from nine to fourteen cents/Kwh, and lowered financing cost for solar projects. The average cost of residential electricity in the U.S. in 2013 was 12.12 cents/Kwh, and was 8.95 cents/Kwh in 2004. These assumptions factor in ongoing U.S. subsidies from the thirty percent investment tax credit for solar energy, which is scheduled to drop to ten percent in the future.

397. INT'L RENEWABLE ENERGY AGENCY, IRENA POLICY BRIEF - RENEWABLES BECOMING MORE COMPETITIVE WORLDWIDE 1 (2012).

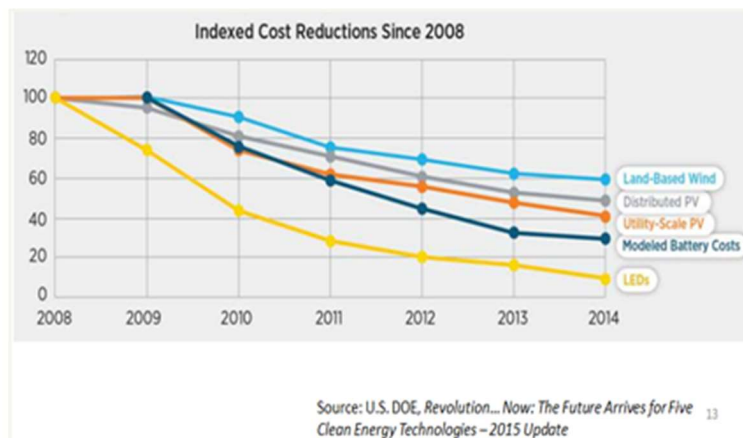
398. SOLAR ENERGY INDUS. ASS'N, SOLAR INDUSTRY DATA: SOLAR INDUSTRY GROWING AT A RECORD PACE 2-3 (2018), <http://www.seia.org/research-resources/solar-industry-data>.

399. See BLOOMBERG NEW ENERGY FINANCE, GLOBAL RENEWABLE ENERGY MARKET OUTLOOK: EXECUTIVE SUMMARY (2011), <http://bnef.com/WhitePapers/download/53.688>.

400. See Roy L. Hales, *2/3 of New US Electricity Capacity Was from Wind in October*, CLEAN TECHNICA, Nov. 24, 2014, <http://cleantechnica.com/2014/11/24/two-thirds-of-us-installations-were-from-the-wind-sector/>.

energy will absorb almost two-thirds of the spending on new power plants over the next twenty-five years, dwarfing spending on fossil fuels.<sup>401</sup>

### 6 year reduction in R.E. costs



**Figure 5**

#### C. Natural Gas As Substitute Fuel

New combined-cycle gas turbines, a spin-off technology from the aviation industry, have transformed the economics of the power industry, by providing a more efficient means to convert fossil fuel energy inputs to electric output.<sup>402</sup> Gas-fired units burn a ‘cleaner’ fuel than coal, typically causing less maintenance expenses for units which burn coal compared to coal or oil.<sup>403</sup> Natural gas combined cycle turbine facilities, which can be modified to increase by up to fifty percent of their start-up times to accommodate pressure and temperature transients of their steam turbines and readiness of their heat recovery steam generators, still may not be flexible enough to be able to follow and instantaneously respond to the ongoing intermittency caused by use of greater wind and solar power in the grid.<sup>404</sup>

401. Ehren Goossens, *Renewables to Beat Fossil Fuels With \$3.7 Trillion Solar Boom*, BLOOMBERG (June 23, 2015).

402. See FERREY, *LAW OF INDEPENDENT POWER*, *supra* note 84, at § 2.9.

403. U.S. ENERGY INFO. ADMIN., *ELECTRIC POWER ANNUAL*, tbl. 8.4, [https://www.eia.gov/electricity/annual/html/epa\\_08\\_04.html](https://www.eia.gov/electricity/annual/html/epa_08_04.html).

404. Nicolas Puga, *The Importance of Combined Cycle Generation Plants in Integrating Large Levels of Wind Power Generation*, 23 ELEC. J. 33, 34 (2010); see Merrill Quintrell, *Reducing Cycling Damage to Combined Cycle Steam Turbines*, POWER (Apr. 4, 2017), <https://www.powermag.com/reducing-cycling-damage-to-combined-cycle-steam-turbines/>.



Hydro-fracking technology greatly increases the recoverable amount of underground natural gas in the United States and this technology is now being exported to the rest of the world.<sup>405</sup> With more supply of natural gas methane, the price of gas in the U.S. market has dropped dramatically, and demand for it has increased equally dramatically.<sup>406</sup> Within the previous five years, natural gas prices have fallen precipitously by one-third of their prior value, which was already low for the last ten years of natural gas prices from 2008 to the present.<sup>407</sup> They now are only a modest premium over coal prices compared on an equivalent energy value of the fuels.<sup>408</sup>

Natural gas is now cost-competitive with the traditionally much cheaper cost of coal for power generation, and has the added benefit of gas producing only approximately one-half as much CO<sub>2</sub> emissions as coal, no particulate matter criteria pollutants, no SO<sub>2</sub> criteria pollutant emissions, and the ability to emit less NO<sub>x</sub>.<sup>409</sup> Because of this new shale gas supply, the real price of natural gas in 2016 is below the price it was twenty years earlier in 1996.<sup>410</sup>

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405. See, e.g., Clifford Krauss, *Boom in American Liquefied Natural Gas Is Shaking Up the Energy World*, N.Y. TIMES (Oct. 16, 2017), <https://www.nytimes.com/2017/10/16/business/energy-environment/liquified-natural-gas-world-markets.html>; see generally EPA, THE PROCESS OF HYDRAULIC FRACKING (Oct. 18, 2017), <https://perma.cc/PM9M-QCQ6> (Hydrofracking is a well-stimulation technique that employs high pressure fluids consisting of water, sand, and a mixture of chemicals to create and maintain small fissures in sub-surface shale rock, creating an escape path for otherwise trapped methane gas to move to perforated wellbores for extraction from the wells as a usable fuel).

406. MACROTRENDS, NATURAL GAS PRICES - HISTORICAL CHART, <https://www.macrotrends.net/2478/natural-gas-prices-historical-chart> (In January 2014, natural gas prices at the Henry Hub were 5.44 dollars per mmbtu, and were 3.53 dollars per mmbtu in November 2018, a decrease of thirty-five percent within this period of slightly less than five years, and a decrease of 76.8 percent from the price of 15.22 dollars per mmbtu in June 2008.); see also Blue Quadrant Capital Mgmt., *The Outlook for U.S. Natural Gas Prices, 2018-2019*, SEEKING ALPHA (Oct. 25, 2017), <https://seekingalpha.com/article/4116380-outlook-u-s-natural-gas-prices-2018minus-2019>.

407. See Gail Teverberg, *Why U.S. Natural Gas Prices are so Low-Are Changes Needed?*, OUR FINITE WORLD (Mar. 23, 2012), <http://ourfinitemworld.com/2012/03/23/why-us-natural-gas-prices-are-so-low-are-changes-needed/>.

408. See Zachary Shahan, *Low Costs of Solar Power & Wind Power Crush Coal, Crush Nuclear, & Beat Natural Gas*, CLEAN TECHNICA (Dec. 25, 2016), <https://cleantechnica.com/2016/12/25/cost-of-solar-power-vs-cost-of-wind-power-coal-nuclear-natural-gas/>.

409. See AM. GAS ASS'N, CLEANER ENERGY, <http://www.aga.org/environmental-benefits-natural-gas> (last visited July 25, 2018); see UNION OF CONCERNED SCIENTISTS, COAL AND AIR POLLUTION, <https://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/coal-air-pollution#.W-cLNxNKgdU>.

410. See U.S. ENERGY INFO. ADMIN., HENRY HUB NATURAL GAS SPOT PRICE, <https://www.eia.gov/dnav/ng/hist/rngwhhdm.htm> (last updated July 25, 2018).

The projection of the U.S. Department of Energy is that there will be a significant increase in U.S. natural gas usage with a corresponding significant decrease in coal use in the next twenty-five years, as shown in Figure 6.<sup>411</sup>

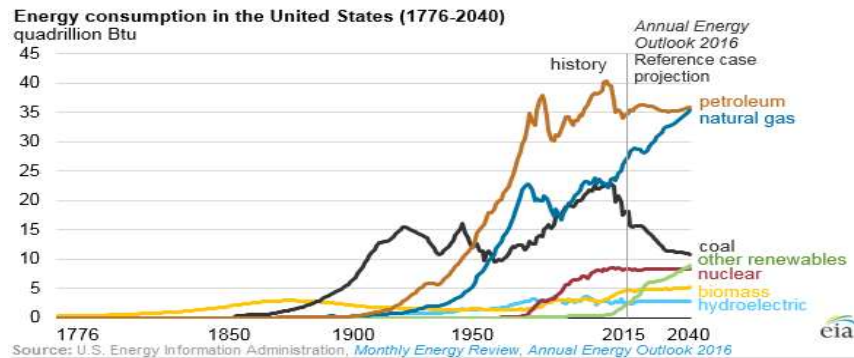


Figure 6<sup>412</sup>

With these different technologies of coal, natural gas combined cycle (NGCC) generation, and wind and solar renewable energy, the future for U.S. energy will be determined by the least cost economics of power generation.<sup>413</sup> In addition to the CPP, federal tax policy affects the economics of these choices.<sup>414</sup> In 2015, there was a multi-year extension and phase-down of the renewable Production Tax Credit (PTC) which was previously scheduled to expire at the end of 2014 and is typically used by wind power projects and the Investment Tax Credit (ITC) which typically is used by solar power projects.<sup>415</sup> Before Congress extended these programs, the PTC had expired at the end of the 2014 tax year, and the ITC was set to drop to a credit of ten percent of project costs at the end of 2016.<sup>416</sup> At the end of 2015, the PTC was extended and phased out by 2020 while the ITC thirty percent tax credit declines to ten percent in 2021 and continues.<sup>417</sup>

411. U.S. ENERGY INFO. ADMIN., FOSSIL FUELS STILL DOMINATE U.S. ENERGY CONSUMPTION DESPITE RECENT MARKET SHARE DECLINE, (July 1, 2016), <https://www.eia.gov/todayinenergy/detail.cfm?id=26912>.

412. *Id.*

413. *See supra* note 410.

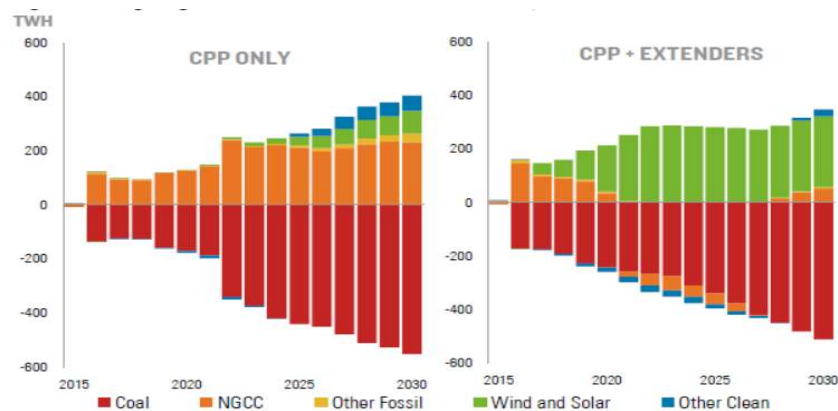
414. *See FERREY, supra* note 82, at §§ 3:53-3:59.115 (discussing federal tax policy affecting the power sector).

415. *Id.* at §§ 3:59.10, 3:59.40.

416. John Larsen & Whitney Herndon, *Renewable Tax Extenders: The Bridge to the Clean Power Plan*, RHODIUM GRP. (Jan. 27, 2016), <http://rhg.com/notes/renewable-tax-extendors-the-bridge-to-the-clean-power-plan> (Please note that the figures reproduced in this article are no longer available on the website).

417. FERREY, *supra* note 84, at § 3:59.

As shown in Figure 7, coal use declines dramatically with or without these federal tax credits. However, without the tax credits extended, in the left image in Figure 7, coal is replaced by natural gas NGCC units as the least-cost option; with the PTC and ITC extended in the right image in Figure 7, solar and wind power assume the dominant role through 2021, adding almost 300 Terawatt-hours (Twh) of generation in lieu of NGCC generation, and continue to be the technology of choice.<sup>418</sup> This dominance of new renewable energy in lieu of natural gas and coal reduces U.S. carbon emissions.



**Figure 7. Change in 2015-2030 Generation from Base Case with CPP with PTC and ITC<sup>419</sup>**

## VII. SEPARATION OF POWERS

The ongoing legal challenge to the CPP, more than two years after the Supreme Court enjoined the regulation even before a lower court decision on the merits,<sup>420</sup> pivots on the Court's *Michigan* decision.<sup>421</sup> Subject to the stay, the D.C. Circuit on its own motions has held back any ruling on the merits of the regulation in abeyance.<sup>422</sup> Even the *Michigan* foundation is still not finally resolved before the D.C. Circuit, as is not the challenge to the Clean Power Plan. Both of these still-pending cases have in common the fact that:

418. Larsen & Herndon, *supra* note 416.

419. *Id.* "Other Clean" includes nuclear power, hydro, and biomass power.

420. *W. Va. v. EPA*, 136 S. Ct. 1000; see Jonathan Adler, *Supreme Court Put the Brakes on the EPA's Clean Power Plan*, WASHINGTON POST (Feb. 9 2016), [https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/02/09/supreme-court-puts-the-brakes-on-the-epas-clean-power-plan/?utm\\_term=.dd512a870f71](https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/02/09/supreme-court-puts-the-brakes-on-the-epas-clean-power-plan/?utm_term=.dd512a870f71).

421. *Mich. v. EPA*, 135 S. Ct. 2699 (2015).

422. *W. Va. v. EPA*, Case No. 15-1363 (D.C. Cir. Aug. 8, 2017).

- Both were designed by the Obama Administration to discourage operation of coal-fired power plants
- Both appear from EPA data to be not cost-effective unless unregulated criteria pollutant “co-benefits” are counted and/or international benefits (beyond U.S. borders and beyond U.S. legal authority to regulate extraterritorially) are counted

Still unresolved in both pending Court matters is whether an executive agency can add estimated indirect incidental “co-benefits,” not included in what a rule regulates, as an additional operand to reverse lesser direct regulatory benefits than the rule’s costs? The resolution of these cases of first impression reset future court deference to agencies. This withdrawal of deference recalibrates separation and weighting of powers among the branches of government.

The indefinite stay of the Clean Power Plan is a key step in a progressive retreat from *Chevron* deference to agency decisions begun in 2014 in *Utility Air Regulatory Group v. EPA*,<sup>423</sup> and continued in 2015 in *King v. Burwell*<sup>424</sup> and *Michigan v. EPA*.<sup>425</sup> The CPP hovers in suspended legal animation after these decisions. Underscoring the legal issue is the recent controversy on the use of coal versus renewable energy or other sources to power the U.S. economy, elevated to a major issue in the most recent presidential election.<sup>426</sup> The CPP’s benefits only exceeded its costs due to the Obama Administration’s counting of unregulated “co-benefits” as well as extraterritorial international benefits outside of U.S. borders.<sup>427</sup> The Trump Administration repeal of the CPP, estimated now to save thirty-three billion dollars in avoided compliance costs in 2030,<sup>428</sup> no longer counts:

- Mitigation benefits to climate occurring globally outside the United States over which the agency has no legal jurisdiction and which the regulation does not address
- Indirect “co-benefits” of pollutants that the Plan does not regulate nor address<sup>429</sup>

423. *UARG v. EPA*, 134 S. Ct. 2427, 2444 (2013) (disfavoring new agency interpretation).

424. *King v. Burwell*, 135 S. Ct. 2480, 2489 (2015) (disregarding opinion of non-expert agencies).

425. *Mich.*, 135 S. Ct. at 2707-08 (prerequisite *de novo* agency consideration of costs before regulation).

426. See A. Parker & C. Davenport, *Donald Trump’s Energy Plan: More Fossil Fuels and Fewer Rules*, N.Y. TIMES, May 26, 2016 (“We’re going to bring back the coal industry, save the coal industry,” he said “I love those people.”).

427. See *supra* notes 182, 192-93.

428. See *supra* note 172.

429. See *supra* note 182.

More important than the unusual legal predicate for this stay, is the retreat from *Chevron* deference, progressively etched by the Court in *Michigan v. EPA*,<sup>430</sup> *UARG v. EPA*,<sup>431</sup> and other recent decisions.<sup>432</sup> *Michigan* is the mirror opposite of traditional *Chevron* deference, a potential shift in Supreme Court reliance on quantitative, economic cost consideration in environmental regulation.<sup>433</sup> The ongoing CPP litigation and MATs litigation raise legal issues of first impression that are redefining administrative deference, without “a jurisdictional train wreck.”<sup>434</sup> These decisions shift the balance of power to construe Congressional statutes from the executive branch to the courts.

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430. See *Mich.*, 135 S. Ct. at 2707-08.

431. *UARG*, 134 S. Ct. at 2444.

432. See *King v. Burwell*, 135 S. Ct. 2480 (2015).

433. *Mich.*, 135 S. Ct. at 2714 (Kagan, J., dissenting).

434. *Chevron U.S.A., Inc. v. Nat. Res. Def. Council*, 467 U.S. 837 (1984).